CONTENTS OF SUPPLEMENT.

PERSONAL 17
Obituary 17
ENGINEERING SOCIETIES 17
Coming Technical Meetings 17
NEW PUBLICATIONS 18
CONSTRUCTION NEWS:
Condensed List of Contracts Pending 19
Railways 19
Street and Electric Railways 20
Electric Light and Power 20
Bridges 21
Buildings 21
Water-Works 22
Irrigation 22
Sewerage 22
Garbage Disposal and Street Cleaning 23
Streets and Roads 23
Manufacturing Plants 23
Gas Plants 24
Miscellaneous Contracts 24
Contract Prices 24
INDUSTRIAL NOTES 24

PERSONAL.

Mr. Christopher Harrison has been appointed City Engineer of Everett, Mass.

Mr. Charles H. Cramp, the well-known shipbuilder of Philadelphia, Pa., has been elected President of the Philadelphia Commercial Museum.

Mr. Harry H. Bender, of Albany, N. Y., has been appointed Superintendent of Public Buildings of New York State, to succeed Mr. Frederick Easton.

Mr. Louis Jacob Affelder, Jun. Am. Soc. C. E., Principal Assistant Engineer of the Pittsburg Bridge Co., Pittsburg, Pa., was married, Jan. 12, to Miss Estella May, of Allegheny, Pa.

Mr. M. McDonough, Roadmaster of the International & Great Northern R. R., with headquarters at Palestine, Tex., has been promoted to be General Roadmaster, a new position.

Mr. Andrew J. C. Foye, for many years New York manager of the Joseph Dixon Crucible Co., Jersey City, N. J., has resigned to accept the office of President of the Standard Graphite Co., 11 Broadway, New York.

Mr. Warren R. Keith has been appointed Superintendent of Streets; Mr. Frank N. Gardner, Water Commissioner, and Mr. Charles R. Felton, City Engineer, of Brockton, Mass., instead of the appointees given in our issue of Jan. 5.

Mr. G. W. Sublette has been elected by the council City Engineer of Minneapolis, Minn., for a term of two years, to succeed Mr. Frederick W. Cappelen, M. Am. Soc. C. E. Mr. Ellis R. Dutton is the Assistant City Engineer.

Mr. Henry A. La Chicotte, M. Am. Soc. C. E., contracting engineer of the Youngstown Bridge Co., Youngstown, O., in charge of the New York office, 150 Nassau St., has resigned, and will practice as a consulting engineer on foundations and general steel construction.

Mr. Charles T. Schoen has been elected President, Mr. E. M. Dickerson, First Vice-President, Mr. W. O. Jacquette, Second Vice-President and Secretary, and Mr. Wm. H. Schoen, Third Vice-President of the Pressed Steel Car Co., with headquarters in Pittsburg, Pa.

Mr. Joseph N. Hoadley has been elected President of the New York Auto-Truck Co., of New York, the incorporation of which was noted in our issue of Jan. 5. The other officers are: Mr. Lewis Nixon, Vice-President; Mr. Nathan Straus, Treasurer, and Mr. C. C. Hardy, Secretary.

Mr. W. B. Upton, Principal Assistant Engineer of the Capital Traction Co., Washington, D. C., in charge of the work of changing the line from cable power to the open conduit electric system, has resigned to resume his private practice as a consulting engineer, with offices in the Washington Loan & Trust Building in the same city.

Mr. William J. Fransioli, General Manager of the Manhattan Ry. Co., of New York city, has resigned, to accept a position with the New York Auto-Truck Co., and the position of General Manager has been abolished. Mr. Alfred Skitt, Vice-President, will perform the duties that formerly pertained to the office resigned by Mr. Fransioli.

Mr. G. M. Scofield has been appointed Contracting Engineer in charge of the New York office of the Youngstown Bridge Co., Youngstown, O., succeeding Mr. H. A. La Chicotte, M. Am. Soc. C. E., resigned, and will have charge of the company's business in New England and the Middle Atlantic states. His office is at 150 Nassau St.

Mr. Allen Hazen, Assoc. M. Am. Soc. C. E., consulting engineer, of New York city, has been appointed as an expert by the selectmen of Millbury, Mass., to determine what progress is being made at the Worcester, Mass., sewage works in regard to the treatment of all sewage before it passes into the Blackstone River, in accordance with a court decree issued several years ago.

Col. John N. Partridge, of Brooklyn, N. Y., has been appointed Superintendent of Public Works of New York State, by Governor Roosevelt, to succeed Mr. George W. Aldridge. Col. Partridge was born in Leicester, Mass., and is a veteran of the Civil War. In 1882 he was appointed Fire Commissioner of Brooklyn, N. Y., and in 1884 was appointed Police Commissioner of the same city. For a number of years and until two years ago he was President of the Brooklyn City & Newtown St. R. R.

Mr. Thomas J. Foster, civil engineer, formerly with Mr. W. G. Triest, contracting engineer, 39 Cortlandt St., New York, and Mr. Robert Maxson Greene, Assoc. M. Am. Soc. C. E., formerly with Milliken Brothers, engineers and contractors, at the same address, have formed a partnership under the firm name of Foster & Greene, architectural engineers, with offices in the Townsend Building, 1123 Broadway, New York city, and will engage in a general architectural engineering business.

OBITUARY.

Mr. James Young, Water Commissioner of White Plains, N. Y., died Jan. 10, aged 38.

Mr. W. R. Campbell, General Manager and Secretary of the Dominion Atlantic Ry., with headquarters at Kentville, N. S., died in London, England, Jan. 8.

Mr. Henry S. Haines, Jr., civil engineer of Burlington, N. J., died Jan. 12, aged 28. His death was due to injuries inflicted Aug. 24, 1897, by an insane negro, who attempted to take his life.

Mr. John Maher, contractor, formerly of New Haven, Conn., died in Chicago, Jan. 15. He built several of the buildings of Yale University, the New Haven waterworks and the general offices in that city of the New York, New Haven & Hartford R. R.

Mr. William McDonald, at one time City Engineer of Altoona, Pa., died of pneumonia, Jan. 5. He was born in St. Clairsville, Pa., Jan. 26, 1823, and became a civil engineer. He was one of the engineers who built the famous dam at Johnstown, Pa., that broke, flooding the city, in 1889.

Mr. M. C. Bullock, President of the Bullock Mfg. Co., makers of mining machinery, died in Chicago, Jan. 12, aged 61. For a number of years he was Chief Engineer of the Diamond Drill Co., and in that capacity was connected with the blowing up of Hell Gate, in the East River, opposite New York city.

Mr. Henry Stuart Wetherbee, Superintendent of Water-Works, of Rome, N. Y., died suddenly, Jan. 10. He was born in Annsville, N. Y., April 2, 1842, and served in the Volunteer Engineers during the Civil War. He was appointed Superintendent of Water-Works of Rome, April 6, 1895, and had held the position ever since.

Major Samuel Killebrew, M. Am. Soc. C. E., of Brownsville, Tenn., connected with the engineering department of the Huntington system of railways, died in Durango, Mexico, Jan. 10. He was educated in Nashville, Tenn., and had spent several years in Mexico. He was elected a member of the American Society of Civil Engineers, Sept. 2, 1885.

Mr. David Dows, Jr., a Director of the Chicago, Rock Island & Pacific Ry. Co., of New York city, died Jan. 13. He was also President of the Atlantic Storage Co., New York, First Vice-President of the Brooklyn Wharf & Warehouse Co., Brooklyn, N. Y., and Vice-President of the Consolidated Elevator Co., Duluth, Minn. He was also a Director in several other milling and financial corporations.

Mr. James Duane, M. Am. Soc. C. E., Assistant Engineer of the Croton Aqueduct Commission, died of consumption at his home in New York city, Jan. 12, aged 47. He was the son of the late Gen. James C. Duane, Hon. M. Am. Soc. C. E., and Chief of Engineers, U. S. Army, who died Nov. 8, 1897. Mr. Duane was born in Schenectady, N. Y., and graduated from the Rensselaer Polytechnic Institute, Troy, N. Y. His first appointment was under his father, who was at that time Chief of the Lighthouse Service from Maine to New York. He spent two years in this work and then went to the Gulf of Mexico, where he was in charge of dredging work. He entered the service of the Department of Public Works of New York city in 1875, with the aqueduct commission, of which his father was the President under Mayor Grace, and remained in this connection until his death. He became a member of the American Society of Civil Engineers, March 2, 1892.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

AMERICAN INSTITUTE, and the HENRY ELECTRICAL SOCIETY.
Jan. 20. "Alternating Currents," Wm. H. Freedman. Secy., D. R. Lovejoy, 111 W. 38th St., New York city.

ROCHESTER ENGINEERING SOCIETY.
Jan. 20. Secy., John F. Skinner, Reynolds Library Bldg., Rochester, N. Y.

THE DETROIT ENGINEERING SOCIETY.
Jan. 20. Secy., Henry Goldmark, Wayne Co. Savings Bank Bldg., Detroit, Mich.

FRANKLIN INSTITUTE.
Jan. 20. "This Country of Ours," John Birkinbine.
Jan. 24. "Practical Application of the Electric Motor to Printing Press Machinery," W. H. Tapley; "Automatic Magnetic Circuit Breakers," Paul R. Goldy.
Jan. 25. "The Early History of Malleable Cast-Iron Castings in the United States," Geo. C. Davis. Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

ENGINEERS' CLUB OF PHILADELPHIA.
Jan. 21. Annual meeting. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERS' CLUB OF COLUMBUS.
Jan. 21. Secy., H. M. Gates, 12½ North High St., Columbus, O.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Jan. 24. Secy., Wm. H. Searles, Case Library Bldg., Cleveland.

NATIONAL ASSOCIATION OF MANUFACTURERS.
Jan. 24-26. Annual convention, Cincinnati, O. Secy., E. P. Wilson, Room A, Chamber of Commerce, Cincinnati, O.

INDIANA ENGINEERING SOCIETY.
Jan. 24-26. Annual meeting, Indianapolis, Ind. Secy., J. B. Nelson, 61 Baldwin Block, Indianapolis, Ind.

MICHIGAN ENGINEERING SOCIETY.
Jan. 24-26. Annual meeting, Lansing, Mich. Secy., F. Hodgman, Climax, Mich.

AMERICAN SOCIETY OF HEATING AND VETILATING ENGINEERS.
Jan. 24-26. Annual meeting, New York city. Secy., S. A. Jellett, 704 Arch St., Philadelphia, Pa.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
Jan. 25. Secy., Ralph W. Pope, 26 Cortlandt, St., New York city.

ILLINOIS SOCIETY OF ENGINEERS AND SURVEYORS
Jan. 25-27. Annual meeting, Champaign, Ill. Secy., Jacob A. Harman, Peoria, Ill.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Jan. 26. Secy., H. C. McLeod, 112 Mansfield St., Montreal, Que.

ENGINEERING ASSOCIATION OF THE SOUTH.
Jan. 26. Secy., C. B. Wilson, 100 Broad St., Nashville, Tenn.

WESTERN SOCIETY OF ENGINEERS.
Feb. 1. "Measurement of Discharge of the Niagara River," Clinton B. Stewart. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF ST. LOUIS.
Feb. 1. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Feb. 1. Secy., C. W. Hunt, 220 West 57th St., New York city.

FOUNDRYMEN'S ASSOCIATION OF PHILADELPHIA.
Feb. 1. Secy., Howard Evans, Pier 45, N. Delaware Ave., Philadelphia, Pa.

CHICAGO ELECTRICAL ASSOCIATION.
Feb. 3. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Feb. 3. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.
Feb. 3. Illustrated lecture, Prof. M. I. Pupin. Secy., Henry I. Weed, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Feb. 3. Secy., O. Von Gerden, 19 Market St., San Francisco, Cal.

ENGINEERING SOCIETY OF WESTERN NEW YORK.
Feb. 6. Secy., H. J. March, Library Bldg., Buffalo, N.Y.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
Feb. 6. Secy., C. L. Annan, City Engineer's Office, St. Paul, Minn.

AMERICAN INSTITUTE OF ARCHITECTS (New York Chapter).
Feb. 8. Secy., Chas. I. Berg, 10 West 23d St., New York city.

NEW ENGLAND WATER-WORKS ASSOCIATION.
Feb. 8. "Filtration, Slow Sand and Mechanical." Secy., J. C. Whitney, Newton, Mass.

BROOKLYN ENGINEERS' CLUB.
Feb. 9. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

WISCONSIN STATE CHEMICAL ASSOCIATION.
Feb. 10. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.

ST. LOUIS RAILWAY CLUB.
Feb. 10. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

MONTANA SOCIETY OF ENGINEERS.
Feb. 11. Helena, Mont. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

THE LOUISIANA ENGINEERING SOCIETY.
Feb. 13. Secy., J. F. Coleman, 712 Union St., New Orleans, La.

ENGINEERS' CLUB OF KANSAS CITY.
Feb. 13. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

DENVER SOCIETY OF CIVIL ENGINEERS.
Feb. 14. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.

NORTHWEST RAILWAY CLUB.
Feb. 14. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

NEW ENGLAND RAILWAY CLUB.
Feb. 14. Secy., Edw. L. Janes, P.O. Box 1158, Boston, Mass.

NATIONAL SANITARY ASSOCIATION.
Feb. 15. Annual meeting, New York city. Secy., Thos. E. Veal, Atlanta, Ga.

BOSTON SOCIETY OF CIVIL ENGINEERS.
Feb. 15. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
Feb. 15. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

NEW YORK RAILROAD CLUB.
Feb. 16. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

ENGINEERS' CLUB OF CINCINNATI.
Feb. 16. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Feb. 16. Secy., F. A. Charpiot, P. O. Box 13, Savannah, Ga.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Feb. 18. Secy., Frank H. Olmsted, Byrne Bldg., Los Angeles, Cal.

BROOKLYN ENGINEERS' CLUB.—A meeting of this club was held on Jan. 12. Mr. Nelson P. Lewis delivered a lecture entitled "Notes of Street Paving Materials and Their Uses." Committees were appointed for the ensuing year. A. J. Provost, Jr., Secy.

ROCHESTER ENGINEERING SOCIETY.—At a special meeting held on Jan. 13, Mr. A. J. Grant, Syracuse, N. Y., presented an illustrated paper on the "Methods of Construction Adopted in Improvements of the Erie Canal Through the Marl Beds of Jordan Level." (Eng. News, Dec. 1, 1898.) John F. Skinner, Secy.

THE MINNESOTA SURVEYORS' AND ENGINEERS' SOCIETY.—The annual meeting of this society was held in St. Paul, Minn., Jan. 10-12. Among the papers presented were the following: "The Resurvey of Nicollet County," O. J. Anderson; "Duluth Watermains," T. F. McGilvray; "Good Roads at the State Fair Grounds," W. G. Smith; "Highway Bridges," Prof. F. H. Constant; "Hydrography of Lake Minnetonka," G. W. Gooley; "Owatonna Rock Tunnel Sewer," W. C. Fraser.

ILLINOIS CLAY-WORKERS' ASSOCIATION.—The annual meeting of this association was held at Peoria, Ill., on Jan. 17-18. Among the papers presented the following are of interest to engineers: "Street Paving," A. D. Thomp-

son, City Engineer, Peoria; "The Future of Clay Products," G. A. Tompkins, Avon; "Making Paving Brick—Not Cheap, but Good," F. Plumb, Streator; "Hollow Block Building vs. Frame," M. W. Lauer, Chicago; "Tiling Swamp Land," L. C. Streeter, Grand Park.

NEW YORK ELECTRICAL SOCIETY.—The 193d meeting of this society was held on Jan. 12. Mr. Joseph Appleton spoke on the "Latest Progress in Storage Battery Installations." Lantern views, photographs and diagrams were exhibited showing the most recent development in storage battery application to central lighting stations and railway and power plants. After the lecture the battery sub-station of the Metropolitan Street Ry. Co., at the foot of West 23d St., was inspected.

AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION.—The next meeting of this association will be held in Buffalo, N. Y., sometime in March, and the following committee has been appointed to formulate a Constitution and By-Laws for the association, to be presented at that meeting: J. F. Wallace, Illinois Central R. R., Chicago; P. A. Peterson, Chief Engineer, Canadian Pac. Ry., Montreal, Que.; Thomas Rodd, Chief Engineer Pennsylvania Lines, Pittsburg, Pa.; C. H. Hudson, Chief Engineer, Southern Ry., Washington, D. C.; W. G. Curtis, Engineer Maintenance of Way, Southern Pacific Ry., San Francisco, Cal.

L. C. Fritch, Secy.

NEW ENGLAND WATER-WORKS ASSOCIATION.—The association held its monthly meeting at Boston on Jan. 11. After the usual lunch and the transaction of some business the balance of the time until about 5.30 was devoted to a series of interesting and valuable papers on water mains, illustrated by many lantern slides. Several were left unread at the adjournment, but they will be published in the Journal. Some of the main features of the papers are given in the body of this issue of Engineering News. The association adopted the recommendation of the Executive Committee that the next fall meeting be held at Syracuse, in accordance with the invitation of Mr. Wm. R. Hill, M. Am. Soc. C. E.

INDIANA ENGINEERING SOCIETY.—The program for the 19th annual meeting of this society, to be held at Indianapolis, Ind., Jan. 24-26, includes the following papers:

"Methods of Testing Paving Brick," Prof. William Kendrick Hatt, Purdue University, Lafayette, Ind.; "Road Maintenance;" Daniel B. Luten, Lafayette, Ind.; "The Training of an Engineer," Prof. W. F. M. Goss, Purdue University, Lafayette, Ind.; "Modern Engineering," Prof. R. L. Sackett, Earlham College, Richmond, Ind.; "Farm Drainage and How?" J. J. W. Billingsley, Indianapolis, Ind.; "Drainage," J. S. Spiker, Vincennes, Ind.; "The Field Notes—What Should They Be?" John W. Fawcett, Delphi, Ind.; "The County Surveyor and His Work," W. W. Clogston, Bloomfield, Ind.; "A Botanical Survey," John E. Alter, Rensselaer, Ind.; "Street Paving," J. T. Jeup, Indianapolis, Ind.; "Public Work and the Civil Engineer," C. G. H. Goss, Martinsville, Ind.; "Purification of Public Water Supplies," John W. Hill, Cincinnati; "City Monuments," John V. Coyner, Indianapolis, Ind.

CANADIAN SOCIETY OF CIVIL ENGINEERS.—The annual meeting of this society was held at Montreal, Canada, beginning Jan. 10. The first day was devoted to routine business and an excursion over the Grand Trunk Ry. to the New Victoria Bridge, which was inspected. In the evening the construction of this bridge was fully described and illustrated in a paper by Mr. Joseph Hobson, Chief Engineer of the Grand Trunk Ry. The second day's excursion was over the Canadian Pacific Ry. to Grand Mere, where the works of the Laurentide Pulp Co. were inspected.

Jan. 12, the third day, was devoted to considering the following papers: "The Soulanges Canal," Thomas Monro; "The Trent Canal," R. B. Rogers; "The Georgia Bay and Ottawa Ship Canal," H. K. Wicksteed. In the evening the annual banquet was held. Jan. 13, the concluding day, was taken up with general business matters and the annual address of Mr. W. G. McN. Thompson, the retiring president. The following officers were elected for 1899: Pres., W. T. Jennings, Toronto; Vice-Presidents, P. N. St. George, K. W. Blackwell, E. H. Keating; Secy., C. H. McLeod; Treas., H. Irwin; Council: G. H. Duggan, John Kennedy, Thomas Monro, R. N. Ruttan, C. H. Rust, G. A. Mountain, D. Macpherson, C. E. W. Dodwell, W. B. McKenzie, E. Marceau, W. Chipman, J. Galbraith, Stuart Howard, E. A. Wilmot, St. George Boswell.

THE ENGINEERS' CLUB OF PHILADELPHIA.—The regular meeting of this club was held on Jan. 7 with 79 members and visitors present. Two papers were presented, both by Mr. John Birkinbine. The first on the "Reconstruction of the York, Pa., Water Supply," outlined the construction of an entirely new system of water supply made necessary by the increase of population and manufacturing industries of that city. Two miles above the city a new pumping station was built upon a branch of the Codorus Creek, containing two pumps of 5,000,000 gallons daily capacity with the necessary boilers, and a pumping main over two miles long was laid to the site of a pair of reservoirs designed for a combined capacity of 40,000,000 gallons. Irregularities in the elevation of this main required the pumps to raise the water 42 ft. higher than the reservoir's full water level. One of these reservoirs leaked badly and it was decided to reconstruct it complete, employing day labor. Work was begun in September, 1897, and as it was evident that the entire reservoir could not be repaired for service before severe weather, it was decided to divide it by a cross embankment and continue the work in the one part as long as the weather would permit. By employing a large force of laborers, working night and day, this new embankment was constructed, the old ones in this portion were compacted, and the bottom sides were puddled with clay without any covering, so that at the end of the year 1897, water was admitted into this temporary section and the city was supplied from it for 10 months. Before the end of that time the work on the remaining portion of the compartment was prosecuted, including the lengthening of this compartment and the shortening of the other one, in order to utilize best the excavation and embankments already made. The second paper consisted of a series of descriptive notes upon a new power improvement, proposing to utilize the fall of water in the gorge of the Niagara River by taking water from below the International Railway bridges into a canal running near the Niagara Falls and Lewiston R. R., on the American shore, and discharging it through turbines in a power house near the Whirlpool outlet.

The annual report of the Board of Directors for the fiscal year 1898 shows a total membership of 425; or, 310 Resident and 45 Non-Resident Members. The total expenditures for the year were $6,782, and the total receipts were $7,026.

FRANKLIN INSTITUTE.—At the last meeting of the Mining and Metallurgical Section held Jan. 11 the following officers were elected for the ensuing year: Pres., James Christie; Vice-Presidents, Dr. D. K. Tuttle and Jos. Richards; Secy., G. H. Clamer.

Mr. A. W. Allen read a paper on the "Segregation of Steel Ingots." The paper was based on many analyses taken from carefully laid out points on a number of ingots. The segregation shown was quite remarkable and was very much more than is generally supposed. The paper was illustrated by a number of slides showing the fracture of entire ingots through their middle longitudinal section. The fracture plainly showed the point of greatest segregation. It was also further pointed out that the causes producing segregation and those producing raised ingots, seem to have some common relation.

Dr. H. M. Chance read a paper on the "Mogollon, New Mexico, Mining District," where vast amounts of silver and gold ore are in sight, which run from $6 to $8 per ton, but which do not pay when worked by any of the present methods.

On Jan. 17 Mr. Allen Hazen, of New York, presented a paper before the chemical section "On the Clarification of River Waters." Most people care more for the appearance of the water which they drink than they do for its healthfulness; and however important we may consider healthfulness, clearness is only second in importance, and is worth all the effort that is necessary to secure it.

Mud can be removed to some extent by sedimentation, but the process is extremely slow, and water taken from a stream at the height of a flood will clear itself by sedimentation much less rapidly than the muddy water is replaced by clear water in the stream itself under ordinary circumstances. With such streams the most effective way to avoid large quantities of mud is by the use of storage reservoirs so large that it is not necessary to take water from the streams during the periods of greatest muddiness.

With very large streams, the muddy periods are of longer duration and the periods of clear water between them are shorter, and this procedure is not always possible.

Neither sedimentation nor storage is adequate to entirely remove turbidity from river waters. The process can only be completed by filtration. Either slow sand or mechanical filtration is capable, within certain limits, of removing mud satisfactorily. It is more difficult oftentimes to remove the finest clay particles than to remove the bacteria.

Nearly all rivers used for public water supplies contain more or less sewage, and in filtering such waters it is necessary to remove as completely as possible all of the bacteria. In mechanical filtration, with the least turbid waters, quantities of coagulant sufficient for clarification are not sufficient to give even tolerably good bacterial efficiencies, and much larger quantities of coagulant must be employed, increasing greatly the expense of the process. With the least turbid waters, sand filters are cheaper and more efficient than mechanical filters; while mechanical filters are cheaper and more efficient in clarifying very muddy waters.

Views of a number of plants for the purification and clarification of river waters were shown.

NEW PUBLICATIONS.

LITERARY MAGAZINES.—The December "Fortnightly Review" contains an article by Wm. Laird Clowes, the English writer on political and naval topics, entitled "American Expansion and the Inheritance of the Race." Mr. Clowes makes the novel proposition that in the new experiment of colonial government on which America has entered, she shall be assisted to make a success by the aid of the experience of Great Britain in similar work. He suggests that forty or fifty young Americans who are to be trained for colonial service shall be given temporary positions in the British service, where they can receive training and acquire experience in the art of governing alien and semi-civilized people in a tropical country. At the same time he proposes to loan to the United States an equal number of Englishmen who have had long experience in colonial government in the English colonies. These men would take the important and responsible positions in Porto Rico and the Philippines, and hold them until such time as they can train assistants to take their places. Mr. Clowes makes the proposition in all seriousness, and has apparently no conception of the fact that most Americans expect to pick out officials to govern our new colonies in exactly the same way that we select other appointive officials. We commend Mr. Clowes' paper to the careful study of those who imagine that it is any light task upon which this nation has entered.

In the December "Contemporary Review," Lord Farrer discusses the truth or falsity of the old-time saying, "Trade Follows the Flag." He reaches the conclusion that under modern commercial conditions trade no longer follows the flag, but the price list. The fact that a great navy has not built up trade is well shown by the experience of France and Italy. Each have great navies; but neither has any export trade, save in the articles which their ability to produce better than other countries would give to them had they not an armed vessel afloat. A paper on "Scientific Ballooning," in the same magazine, also deserves mention here.

The January "North American Review" opens with a paper by Andrew Carnegie on "Americanism vs. Imperialism." He opposes any formal alliance between Great Britain and the United States, and thinks that we should endeavor to establish a stable government in the Philippines, and then leave the Filipinos to govern themselves, as we shall the Cubans. President M. H. Smith, of the Louisville & Nashville Ry., in the same magazine, writes of "The Powers of the Interstate Commerce Commission," and opposes the proposal to increase these powers, which he alleges would be the result of the amendments to the law which the Commission has recommended. Ferdinand W. Peck, Commissioner-General of the United States to the Paris Exposition, explains what has been and is to be done to insure an adequate representation of this country and its products next year. Two other articles in the same magazine which deserve mention here are "Sheathing War Ships" and "Private Property at Sea in War." The author of the first of these apparently labors under the impression that electroplating the steel hull with copper is the method of copper sheathing now in general use.

The article in the January "Forum," upon the sanitation of Havana, was abstracted at length in our last issue. In the same magazine the recent municipal house-cleaning in San Francisco is described by Prof. Frank W. Blackmar, of Kansas State University, and Adjutant-General Corbin writes on "The Army of the United States." He declares that the future regular army of the United States should be not less than 70,000 men. Prof. Trowbridge, Director of the Jefferson Physical Laboratory, at Harvard University, describes the physical condition existing in the upper regions of the air, which Mr. Nikola Tesla has recently proposed to use as an electric conductor.

The "Review of Reviews" for January is chiefly devoted to discussion of the issues which the war has left on our hands. Among the illustrations in the number is an excellent portrait of General Ludlow. An article in the present number that deserves a mention here is that in which W. F. Stead describes his visit to the Czar of Russia.

In the "Pall Mall Gazette" is a most entertaining account of the Nile campaign, and the battle of Omdurman, written by an English officer who took part in it. We know of no other American publication in which so detailed an account of this most important battle has appeared.

In the "Atlantic Monthly" President Eliot compares the Destructive and Constructive energies of the United States Government, and points out various ways in which the nation ought to enlarge its field of work. Among his suggestions is that Congress should enact legislation to compel the equipment of freight cars with automatic couplers, and it is evident that he is in ignorance of the fact that the subject was fully covered by legislation years ago and that the fruit of that legislation is now just beginning to be reaped. He also criticises the old method of conducting River and Harbor Work by doling out niggardly appropriations, and is apparently unaware that a reform was effected a few years ago, under which certain works are carried on in much more businesslike fashion.

In "The Century" for January, Lieut. Hobson continues his story of the sinking of the "Merrimac," and Capt. Sigsbee concludes his tale of the "Maine's" loss. Still another naval officer who contributes to this number is Captain Crowninshield, who writes a brief paper on the Nicaragua Canal. It is a popular account of the enterprise, but is marred by the evident partisanship of the writer in favor of the purchase by the United States of the Maritime Canal Company's concession. On the other hand the same number contains an "Open Letter," in which the merits of Panama Canal enterprise are pointed out, and the Nicaragua enterprise is criticised with equal prejudice and partisanship.

In the "Cosmopolitan" Mr. Sidney H. Short writes on the coming electric railroad. Most electrical engineers have wisely abandoned their extravagant claims of which so much was heard a few years ago of the electric motor displacing the locomotive. Mr. Short, however, is still dreaming, and he tells us a fairy tale of electric transmission at 30,000 volts pressure, etc., etc. The only reason he gives for the vast outlay he describes, however, is that 5 lbs. of coal in a steam locomotive are required to do

what 1½ lbs. will do in a stationary plant. It is a pity that the public should be deceived by such fol-de-rol in the popular magazines.

In "Harper's" for January, H. W. Wilson, the English Naval authority, tells of the "Naval Lessons of the War." The first and greatest of these is that personnel, discipline and training are as necessary to victory as modern ships and armament. The second notable one is that quick-firing artillery of moderate caliber is in every way the most effective. We note with interest in the article a paragraph in which the writer expresses his astonishment that four new monitors are to be added to the United States Navy. Another "war story," and a very good one, in the same magazine is by Admiral Sampson's Flag-Lieutenant, who writes on the naval campaign in the West Indies. "Scribner's" for this month is likewise filled with war material, beginning with Governor Roosevelt's story of the Rough Riders and winding up with an account of the battle of Omdurman.

THE ISLAND OF CUBA MAGAZINE.—Vol. I, No. 1. Jan., 1899; 8vo.; pp. 56. Havana, The Island of Cuba Pub. Co., 42 O'Reilly St. $5 per annum.

This new aspirant for literary favor makes its appearance in a red, white and blue cover, and appeals for support to both American and Cuban readers, being printed in both English and Spanish in parallel columns. The English, however, is an amusing curiosity from a literary point of view, and we cannot forbear quoting verbatim the following extract from that part of the prospectus of the new publication in which the editor tells of one department of his publication to be devoted to "the Cuban woman:"

No Magazine can be complete and of a general utility if women have no signification in it. Who does not know what our women are worth? We do not mean that women of the tropics are more gentle, more affectionate more domestic than those of the temperate zone. Many cubans have married in the United States beautiful and distinguished ladies and their homes shine with as intense rays of happness as if they were born in our sunny land. The everlasting honey moon, both of the cuban patriot and his american refined wife and of the northern man and his sweet cuban companion can be easily explained by natural causes: the diversity in the specific secondary characters of the varieties of a same specy, is, generally, a strong cause of atraction and intimate fusion of ethichal elements between two individuals of a distinct sex. This is a biological law.

The curious English, the bad typography and the high-flown language, of which the magazine is full, we find after all more provocative of sympathy than mirth. As evidence of the aspirations of the Cuban people, and their determination to raise their land in the scale of civilization, it is of no small interest.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work.	Place.	See Eng. News.
Jan. 19.	Hardware, etc.,	New York, N. Y.	Jan. 12
Jan. 19.	Water-works,	Florence, Colo.	Jan. 12
	Advertised, Engineering News, Jan. 12.		
Jan. 19.	Heating, etc.,	Pottsville, Pa.	Dec. 29
	Advertised, Eng. News, Dec. 29 and Jan. 5.		
Jan. 19.	Steam heating, etc.,	Akron, O.	Dec. 29
Jan. 19.	Docks, dredging, etc.,	Cleveland, O.	Dec. 29
Jan. 19.	Rebuilding water tower,	Montreal, Que.	Jan. 19
Jan. 19.	Heating apparatus,	New Haven, Conn.	Jan. 19
Jan. 20.	Railroad grading,	Waterville, Me.	Jan. 19
Jan. 20.	Grading,	Omaha, Neb.	Jan. 19
Jan. 20.	Hotel building,	Evansville, Ind.	Jan. 19
Jan. 20.	Bridge work,	Boston, Mass.	Jan. 19
Jan. 20.	Bridge, Deer Creek,	Minn.	Jan. 19
Jan. 20.	Street lighting,	Belding, Mich.	Dec. 29
Jan. 20.	Revetments,	Houghton, Mich.	Dec. 29
Jan. 20.	Boilers and machinery,	St. Joseph, Mich.	Dec. 29
	Advertised, Eng. News, Dec. 29 and Jan. 5.		
Jan. 20.	Hotel building,	Evansville, Ind.	Jan. 5
Jan. 20.	Towing deck scows,	New York, N.Y.	Jan. 12
Jan. 21.	Paving,	Lynchburg, Va.	Jan. 12
Jan. 21.	Building,	Washington, D. C.	Dec. 29
Jan. 21.	Artesian well,	Cheboygan, Mich.	Jan. 5
Jan. 21.	Pipe sewers, etc.,	Rochester, N. Y.	Jan. 19
Jan. 21.	Wooden bridge,	Wingham, Ont.	Jan. 19
Jan. 23.	Broken stone, etc.,	New London, Conn.	Dec. 29
	Advertised, Eng. News, Dec. 29 to Jan. 19.		
Jan. 23.	Hospital building,	New Orleans, La.	Jan. 12
Jan. 23.	Electric lighting,	Sea Isle City, N. J.	Jan. 12
	Advertised, Engineering News, Jan. 12.		
Jan. 23.	Pipe sewers,	South Bend, Ind.	Jan. 12
Jan. 23.	Sewer,	Yuma, Ariz.	Jan. 12
Jan. 23.	Sewers, etc.,	Salem, O.	Jan. 19
Jan. 23.	Bridge,	Ashcroft, B. C.	Jan. 19
Jan. 23.	Road work, etc.,	Atlantic City, N. J.	Jan. 19
Jan. 23.	Brick paving,	Louisville, Ky.	Jan. 19
Jan. 24.	Condenser tubes,	League Island, Pa.	Jan. 19
Jan. 24.	Naval supplies,	Portsmouth, N. H.	Jan. 19
Jan. 24.	Overhead traveler,	London, Eng.	Jan. 19
Jan. 24.	Electric lamps,	Chicago, Ill.	Jan. 19
Jan. 24.	Pipe sewers,	Rochester, N. Y.	Jan. 19
Jan. 24.	Steel bridge,	Chatham, Ont.	Jan. 19
Jan. 24.	Paving,	Buffalo, N. Y.	Jan. 19
Jan. 24.	Alterations to engines,	London, England.	Jan. 12
Jan. 24.	Steel bridge,	Waverly, Ia.	Jan. 12
Jan. 24.	Sewer pipe,	East Liverpool O.	Jan. 12
	Advertised, Eng. News, Jan. 12 and 19.		
Jan. 24.	Water-works bonds,	Wamego, Kan.	Dec. 29
Jan. 24.	Iron bridges (2),	St. Thomas, Ont.	Dec. 22
	Advertised, Eng. News, Dec. 22 and 29.		
Jan. 24.	Storage batteries (4),	Ft. Monroe, Va.	Jan. 5
	Advertised, Eng. News, Jan. 5 and 12.		
Jan. 24.	Water-works,	Canby, Minn.	Jan. 5
Jan. 24.	Garbage collection, etc.,	Chicago, Ill.	Jan. 5
Jan. 25.	Dormitory building, etc.,	Phoenix, Ariz.	Dec. 29
Jan. 25.	Water-works bonds,	McConnellsville, O.	Jan. 5
Jan. 25.	Water-works, etc.,	Orangeburg, S. C.	Jan. 5
	Advertised, Engineering News, Jan. 5.		
Jan. 25.	Conduit material,	Baltimore, Md.	Jan. 12
	Advertised, Eng. News, Jan. 12 and 19.		
Jan. 25.	Warehouse,	Chicago, Ill.	Jan. 19
Jan. 25.	Chain ferry,	Toronto, Ont.	Jan. 19
Jan. 25.	Heating and plumbing,	St. Thomas, Ont.	Jan. 19
Jan. 25.	Castings (W.-W.).	Baltimore, Md.	Jan. 19
Jan. 25.	Water pipe,	Boston, Mass.	Jan. 19
	Advertised, Engineering News, Jan. 19.		
Jan. 26.	Bridge work,	Buffalo, N.Y.	Jan. 19
Jan. 26.	Deepening river,	Buffalo, N. Y.	Jan. 19
Jan. 26.	Brick, etc.,	Washington, D. C.	Dec. 29
	Advertised, Eng. News, Dec. 29 to Jan. 19.		
Jan. 27.	Water cylinders,	Cleveland, O.	Jan. 5
Jan. 27.	Sewers,	Little Falls, N. Y.	Jan. 19
Jan. 28.	Bridge abutment,	Evansville, Ind.	Jan. 19
Jan. 28.	Gas lamps (7,750),	Cleveland, O.	Jan. 5
Jan. 28.	Steam launch,	San Diego, Cal.	Jan. 12
Jan. 28.	Water-works,	New Albany, Ind.	Jan. 12
	Advertised, Engineering News, Jan. 12.		
Jan. 30.	Day beacons (6),	Florida Reefs, Fla.	Jan. 5
	Advertised, Eng. News, Jan. 5 to 26.		
Jan. 30.	Brick paving (11,000 sq.yds.),	Kokomo, Ind.	Jan. 12
Jan. 30.	Water-works,	Baltimore, Md.	Jan. 19
Jan. 30.	Gas lighting,	Laconia, N. H.	Jan. 19
	Advertised, Eng. News, Jan. 19 and 26.		
Jan. 30.	Pipe sewers,	Toledo, O.	Jan. 19
Jan. 30.	Electric lighting,	Laconia, N. H.	Jan. 19
	Advertised, Eng. News, Jan. 19 and 26.		
Jan. 31.	Electric machinery,	London, England.	Jan. 19
Jan. 31.	Railway (50 miles),	South Hero, Vt.	Jan. 19
	Advertised, Eng. News, Jan. 19 and 26.		
Jan. 31.	Gas engines (4),	London, England.	Jan. 19
Jan. 31.	Railway bridges,	Rutland, Vt.	Jan. 19
	Advertised, Eng. News, Jan. 19 and 26.		
Jan. 31.	Wharf,	Fort Barrancas, Fla.	Jan. 12
Jan. 31.	Drainage work,	Chipping Norton, England.	Jan. 12
Jan. 31.	Dry dock,	Boston, Mass.	Dec. 29
Feb. 1.	Substructure of canal pier,	Duluth, Minn.	Jan. 5
	Advertised, Eng. News, Jan. 5 to 26.		
Feb. 1.	Library building,	Owatonna, Minn.	Jan. 5
Feb. 1.	Electric light plant,	Richmond, Va.	Jan. 5
Feb. 1.	Electric light plant,	Menahga, Minn.	Dec. 29
Feb. 1.	School building,	Peoria, Ill.	Dec. 1
Feb. 1.	Wharves and dredging,	Honolulu, H. I.	Jan. 12
Feb. 1.	Macadamizing,	Fayetteville, Ark.	Jan. 12
Feb. 1.	Jail building,	Augusta, Mont.	Jan. 19
Feb. 1.	Gun forgings,	Washington, D. C.	Jan. 19
Feb. 1.	Paving and curbing,	Jamestown, N. Y.	Jan. 19
Feb. 1.	Street bonds,	Shreveport, La.	Jan. 19
Feb. 1.	Street and building bonds,	Appleton, Wis.	Jan. 19
Feb. 2.	Steel bridge,	Helena, Mont.	Jan. 19
Feb. 2.	Graveling,	Memphis, Tenn.	Jan. 19
Feb. 2.	Electric lighting,	New Orleans, La.	Nov. 3
Feb. 3.	Dredging (1,750,000 c.yds.),	Houghton, Mich.	Dec. 29
Feb. 3.	Sewer pipe (1½ miles),	Spartanburg, S. C.	Jan. 12
	Advertised, Eng. News, Jan. 12 and 19.		
Feb. 8.	Pipe sewers,	Spartanburg, S. C.	Jan. 12
	Advertised, Eng. News, Jan. 12 and 19.		
Feb. 3.	Dredging canals,	Keweenaw Point, Mich.	Jan. 5
	Advertised, Eng. News, Jan. 5 to 26.		
Feb. 4.	Heating and ventilating,	Cleveland, O.	Jan. 19
Feb. 5.	Heating and ventilating,	Burlington, Vt.	Jan. 19
Feb. 6.	Brick paving,	Toledo, O.	Jan. 12
Feb. 6.	Electric lighting,	Johnstown, N. Y.	Jan. 19
Feb. 6.	Brick sewers,	Ottawa, Ont.	Jan. 19
Feb. 6.	Church building,	Fresno, Cal.	Jan. 19
Feb. 6.	Steel bridge,	De Sota, Mo.	Jan. 19
Feb. 6.	Macadam roads (2),	Vevay, Ind.	Jan. 19
Feb. 7.	Road,	Placerville, Cal.	Jan. 19
Feb. 7.	Electric plant,	Woodsfield O.	Jan. 19
Feb. 7.	Water bonds,	Columbus, Miss.	Jan. 19
Feb. 7.	Sale of canal,	Annapolis, Md.	Dec. 1
Feb. 8.	Road work (29½ miles),	Rockville, Ind.	Jan. 19
Feb. 10.	Electric lighting,	York, Pa.	Jan. 19
Feb. 10.	Jail building,	Keyser, W. Va.	Sept. 20
Feb. 11.	Wooden bridges,	York, Neb.	Jan. 19
Feb. 13.	Steel hull,	New Orleans, La.	Jan. 19
	Advertised, Eng. News, Jan. 19 to Feb. 2.		
Feb. 13.	Crane boat,	Charleston, W. Va.	Jan. 19
Feb. 13.	Water bonds,	Reno, Nev.	Dec. 22
Feb. 13.	Court house, Rock Springs,	Tex.	Jan. 12
Feb. 14.	Brick paving, etc.,	St. Louis, Mo.	Jan. 19
Feb. 15.	Irrigation canal,	Albuquerque, N. Mex.	Jan. 19
	Advertised, Eng. News, Jan. 19 to Feb. 2.		
Feb. 16.	Pier superstructure, etc.,	Duluth, Minn.	Jan. 19
Feb. 16.	Court house,	Buckhannon, W. Va.	Jan. 19
Feb. 16.	Swing bridges (2),	Alexandria, Egypt.	Jan. 19
Feb. 16.	Electric installation,	Fort Point, Tex.	Jan. 19
	Advertised, Eng. News, Jan. 19 to Feb. 16.		
Feb. 16.	School building,	Ellendale, N. Dak.	Jan. 12
Feb. 16.	Macadamizing,	Decatur, Ind.	Jan. 12
Feb. 20.	Lift bridge near Taylor St.,	Chicago, Ill.	Dec. 29
	Advertised, Engineering News, Dec. 29.		
Feb. 20.	Stone heads,	Newark, N. J.	Jan. 19
	Advertised, Eng. News, Jan. 19 to Feb. 9.		
Feb. 20.	Buoys, etc.,	Tompkinsville (S.I.), N. Y.	Jan. 19
	Advertised, Eng. News, Jan. 19 and 26.		
Feb. 21.	Pumping plant,	Honolulu, H. I.	Jan. 12
	Advertised, Eng. News, Jan. 12 and 19.		
Feb. 22.	Jail building,	Alexandria, La.	Jan. 19
Feb. 25.	Court house,	Douglass, Ga.	Dec. 29
Feb. 26.	Porcelain insulators,	Christiania, Norway.	Jan. 19
Feb. 28.	Dust-cart designs,	London, England.	Jan. 5
Mar. 1.	Court house,	Arkadelphia, Ark.	Jan. 5
Mar. 1.	Railway and highway bridge,	Quebec, Que.	Jan. 12
	Advertised, Eng. News, Sept. 29 and Oct. 6.		
Mar. 1.	Court house,	Arkadelphia, Ark.	Jan. 19
Mar. 1.	Water-works,	Oto, Ia.	Jan. 19
Mar. 12.	Electric light plant,	Manlius, N. Y.	Jan. 12
Mar. 15.	Purchase of water-works,	Belem, Brazil.	Dec. 1
Mar. 15.	Electric r'y (23 miles),	Shanghai, China.	Nov. 24
	Advertised, Eng. News, Nov. 17 to Dec. 8.		
Mar. 15.	Bridges (3),	Joliet, Ill.	Jan. 19
	Advertised, Engineering News, Jan. 19.		
Mar. 31.	Telephone concessions,	Shanghai, China.	Nov. 24
	Advertised, Eng. News, Nov. 17 to Dec. 8.		
Apr. 1.	Viaduct substructure	St. Joseph, Mo.	Jan. 5
Apr. 1.	Opera house,	Columbus, Ga.	Jan. 19
Apr. 14.	Hall building,	Bradford, England.	Jan. 19
No date.	Police signal system,	Los Angeles, Cal.	Jan. 19
"	Beet-sugar factory,	Port Huron, Mich.	Jan. 19

RAILWAYS.

ALABAMA & TOMBIGBEE.—G. R. Hannon, Gen. Mgr., Fulton, Ala., informs us that this line is now under construction to Lower Peach Tree, via Eustis, work being done by the day under the direction of the owners. The length projected is 27 miles. J. S. Burr, Pres.; G. S. Kellan, Ch. Engr., both of Fulton.

ARLINGTON & BLUFFTON.—This company was incorporated in Georgia, Jan. 5, to construct a line from Blakely, on the Central R. R. of Georgia, 11 miles out into the turpentine district. Col. J. A. Maxwell, Pres.

ATLANTIC & DANVILLE.—Reports state that this company has commenced the construction of an extension to its main line from Virginia, Va., near the southern state line, to copper mines about five miles distant. S. P. Daniel, Engr., Virginia, Va.

BIG THREE.—A bill has been introduced into Congress granting this company the right to construct a railway from Little River county, Ark., to Sherman, Tex., via Indian Territory and Oklahoma City and Guthrie, Okla. D. C. Willett, Pres., Morganfield, Ky.

BISMARK & POTOMAC VALLEY.—Samuel B. Shank, Gen. Mgr., Millersville, Pa., informs us that surveys are now being made for this proposed line from Davis, W. Va., to Winchester, Va. B. G. Smith, 1001 Witherspoon Bldg., Philadelphia, Pa.; C. M. Bolton, Ch. Engr., Rio, Va.

CAROLINA NORTHERN.—This company was incorporated in North Carolina, Jan. 10, with a capital stock of $500,000, to build a line from Lumberton, N. C., to Marion, S. C., 45 miles. Alfred A. Sparks, Pres.; M. M. Freeman, Vice-Pres.; George Wertsner, Secy. and Treas., all of Philadelphia, Pa.

CENTER & TENAHA.—S. T. Fleshman, Supt., Center, Tex., informs us that the company has about five miles of line graded and most of the right of way obtained between Center and Tenaha, Tex.; 11 miles. It is expected to finish grading during this year, and to commence operation by the first of next year. A. R. Chandler, Pres.

CENTRAL NEW ENGLAND.—This company, incorporated in New York on Jan. 12, is a reorganization of the Philadelphia, Reading & New England R. R. Co. The capital stock is $6,600,000. The directors are: Arthur Brock, Lebanon, Pa.; Henry O. Seixas, Chester W. Chapin, David A. Geraty, Charles C. Burns and J. K. O. Sherwood, 192 Broadway, New York; George A. Fletcher, Henry L. Davis, R. M. Janney and John W. Brock, of Philadelphia; James A. Rumrill, Springfield, Mass.

CHEROKEE MINING & MFG. CO.—L. S. Colyer, Pres., Chattanooga, Tenn., informs us that this company has about completed the grading for nine miles of road from a point on the Chattanooga, Rome & Southern R. R. to Mill Creek, Ala. Work is expected to be completed by March 1. C. W. Howard, Ch. Engr., Lyerly, Ga.

CHICAGO, MILWAUKEE & ST. PAUL.—This company has decided to make improvements to its system during the coming spring, according to reports, to aggregate about $2,000,000. Of this, about $500,000 will be used on the track elevation in Chicago, $500,000 for removing the present sharp curves, gravel ballasting, etc., on the La Crosse division, and the balance on the line generally in relaying track, building permanent iron bridges, etc. D. J. Wittemore, Ch. Engr., Chicago, Ill.

CHOCTAW & MEMPHIS.—It is announced that this new line of the Choctaw, Oklahoma & Gulf R. R. Co., from Howe, Ind. Ter., to Little Rock, Ark., via Munroe, Mansfield, Echo, Boonville, Magazine, Danville, Houston and Esau, 164 miles, is expected to be in operation by Oct. 1. Contracts have been let for building the entire line, and work is now under way. F. A. Molitor, Ch. Engr., Little Rock, Ark.

COAHUILA CENTRAL.—W. E. Dorwin, Gen. Mgr., 304 Tacoma Bldg., Chicago, Ill., informs us that the contract let to C. E. Coon, of Saltillo, Mexico, for the construction of this proposed line from Saltillo to Trevino, 60 miles, has been declared forfeited by reason of non-fulfillment of the contract. The work will be relet on Feb. 1 and pushed rapidly towards completion. S. J. Martin, Pres.; S. Potis, Ch. Engr., both of Saltillo.

COLUMBIA RY. & NAVIGATION CO.—Paul F. Mohr, Pres., Tacoma, Wash., is reported to have stated that this company will build in the spring 20 miles of standard-gage railway from Crate's Point, below The Dalles, to Columbus, on the Washington side of the Columbia River. This line is designed principally to carry grain from the Klickitat Valley around the rapids near The Dallas.

COLUMBUS, BLOOMINGTON & TERRE HAUTE.—Chas. W. Shaw, Gen. Supt., Bloomington, Ind., informs us that no surveys have yet been made for this proposed line, but it is expected to make surveys and to secure the right of way next month. A previous survey was made about 1873. The route is from Columbus to Terre Haute, via Nashville, Bloomington, Ellettsville, Spencer, Patricksburg, Clay City or Bowling Green, about 85 miles. Main office at Bloomington, with branch office at Columbus, Ind. P. B. Willoughby, Pres., Bloomington.

DENVER & RIO GRANDE.—E. T. Jeffery, Pres. and Gen. Mgr., Denver, Colo., is quoted as stating that this company proposes to standardize its Veta Pass route into the San Luis Valley as far as Alamosa, Colo. It is also expected to add 1,000 freight cars to its standard gage equipment, and at least ten heavy locomotives and perhaps more. About 8,000 tons of steel rails will also be bought from the Colorado Fuel & Iron Co., for use in repairing the main line. Clough & Anderson, Colorado Springs, Colo.; Dumphy & Nelson, Victor, Colo., and Levi & McDonald, Pueblo, Colo., received contracts Jan. 11, for grading 27 miles of the roadbed on the Veta Pass route.

DULUTH & NORTHEASTERN.—J. H. Heininger, Audr., Cloquet, Minn., informs us that 28 miles of main line and ten miles of branches have been completed from Lynds, on the Duluth & Iron Range R. R. to Island Lakes, Minn., on the Cloquet River. This line was built for logging purposes, and the contract was held by Williamson, Campbell & Gowin, Duluth, Minn. F. Weyerhauser, Pres., St. Paul, Minn.

FORT DODGE & OMAHA.—John F. Duncombe, Pres., Fort Dodge, Ia., states that 85-lb. rails have been bought for the entire line. All the ties have been contracted for and contracts have been made for 61 miles of the grading. The construction of the line will be under the supervision of the chief engineer for the Illinois Central and will be completed by the end of the next summer.

FORT WORTH & RIO GRANDE.—Reports state that this company has applied to the railroad commission for authority to issue $20,000 of bonds a mile on a proposed extension of its line from Brownwood, Tex., to San Antonio, Tex., about 200 miles. If the request is granted, it is reported that the construction will begin at an early date. W. B. King, Engr., Fort Worth, Tex.

GRAND TRUNK.—Negotiations are said to be pending between this company and the government for a route between Collingwood and Toronto, Ont., so as to bring the upper lakes in direct communication with the Atlantic seaboard.

HOUSTON, EAST & WEST TEXAS.—Reports state that George W. Burkett, Palestine, Tex., has made a contract to supply new ties to this company for its entire line of 192 miles. E. B. Cushing, Gen. Supt. and Ch. Engr., Houston, Tex.

IAEGER & SOUTHERN.—Walton & Luck are reported to have obtained the contract for building 4.6 miles of railway for this company from Iaeger, W. Va., on the Norfolk & Western Ry., towards the mouth of Jacob's Fork on Sandy River. The company was incorporated Jan. 21, 1898, with a capital stock of $25,000. Wm. D. Janney, Ch. Engr., Welsh, W. Va.

INDO-CHINA.—The Governor-General of Indo-China, with the consent of the French government, proposes to make a loan of $40,500,000 solely for the construction of a network of railways to be used in developing the rich natural resources of Tonkin and Cochin-China.

KUSHEQUA.—Elisha K. Kane, Pres., Kushequa, Pa., informs us that A. S. Bevacquo & Co. have built three miles of this new line and are building four miles more. The contract for the balance will not be let before April or May. Most of the capital for construction has been secured. The route is from Kushequa to Farmers Valley, via Newton and Ormsby, 16 miles. G. H. Lyon, Ch. Engr., Ormsby, Pa.

LAKE TAHOE RY. & TRANSPORTATION CO.—D. L. Bliss, Pres., Carson City, Nev., informs us that the surveys have been made, right of way obtained and the capital secured for the proposed line between Truckee and Tahoe City, Cal., on Lake Tahoe, 15 miles. Contracts will be let as soon as spring opens. W. S. Bliss, Ch. Engr., Carson City, Nev.

LICKING VALLEY.—J. Morrow, Audr., Yale, Ky., informs us that the Sterling Lumber Co. has the contract for building this line from Yale to Salt Springs, Ky., eight miles. About four miles of track is laid.

NEW YORK & OTTAWA.—F. D. Anthony, Ch. Engr., Ottawa, Ont., informs us that this railway has been completed between Ottawa and Moira, N. Y., excepting the St. Lawrence bridge and some terminal work at Ottawa and some ballasting on the New York part of the line. C. B. Hibbard, Pres., Ottawa.

OGDENSBURG & LAKE CHAMPLAIN.—Reports state that Percival W. Clements, Pres. of Rutland R. R. Co., and representing a syndicate including W. Seward Webb, Chauncey M. Depew and W. K. Vanderbilt, of New York, and George H. Ball, of Boston, has purchased of Charles Parsons, Chn. of the Ogdensburg & Lake Champlain reorganization committee, the securities of that company, deposited under the plan and agreement of reorganization. The Rutland Co. will immediately build from Burlington, Vt., to a connection with the Ogdensburg & Lake Champlain at Rouse's Point, a distance of 40 miles. A number of Fitchburg directors are said to be interested in this proposed new line from northern New York to Boston, which is 17 miles shorter from Boston to Ogdensburg or Oswego.

ONTARIO.—Applications have been made to the Provincial Assembly for the incorporation of the Bruce Mines & Algoma, the Workington & Onaping, and the Algoma Central & the North Lanark railways. The Bruce Mines & Algoma line will run from Bruce Mines to Rock Lake Copper Mines in Coffin township, then north 30 miles. The Algoma Central will run from Sault Ste. Marie to Michipicoten River, then to the Canadian Pacific, and then southerly to Michipicoten Harbor. This company asks permission to build docks, elevators, steamboats, a telegraph and telephone system and to supply electricity to miners. The Worthington & Onaping road is to run from Worthington to Drury township north to Inez mine, then northeasterly to Sultana mine, then north and east to Onaping Station.

OTTUMWA & NORTHERN.—This company was incorporated in Iowa, Jan. 4, with a capital stock of $100,000, to construct a line from Ottuma, Ia., to the Iowa Central Ry. near Wright, about 17 miles. The directors are: T. D. Foster, J. G. Hutchinson, J. T. Hackworth, Samuel Mahon, W. B. Bonnifield and others.

PORTLAND & ROCHESTER.—Reports from Portland, Me., state that Illsley & Cummings have been at work for some time on a complete survey of this railway, which is in operation between Portland and Rochester, and has 52 miles of tracks.

RUTLAND-CANADIAN.—Bids are asked until Jan. 31 for grading, masonry and track-laying for about 50 miles of main line and sidings on this new line from Burlington, Vt., north. Approximate quantities: 450,000 cu. yds. rubble stone embankment, 10,000 cu. yds. solid stone excavation, 2,000 cu. yds. of bridge masonry, etc. Work must be completed by Sept. 1. Bond required, $50,000; deposit, $5,000, as stated in our advertising columns. Frank R. Wells, Pres.; John W. Burke, Ch. Engr., Rutland, Vt.

SAUGATUCK & SOUTH HAVEN.—A. A. Patterson, Jr., Benton Harbor, Mich., informs us that this company, incorporated Dec. 16, intends to build from Saugatuck to South Haven, via Douglass, Mich, 22 miles. C. E. Drew, Ch. Engr., South Haven, Mich.

SHEBOYGAN & WESTERN.—This company is to be incorporated in Wisconsin to build a line from Sheboygan to a connection with the Chicago, Milwaukee & St. Paul Ry. at Waldo, Wis. The incorporators are: S. Wescellius and A. Mendelsohn, Grand Rapids, Mich.; Jerry Donohue, Frank L. Reenitz and George B. Mattoon, of Sheboygan.

TOPEKA, WESTMORELAND & WATERVILLE.—This company was incorporated in Kansas, Jan. 10, with a capital stock of $3,000,000, to build a standard gage railway from Topeka through Shawnee, Riley, Wabaunsee, Jackson, Pottawatomie and Marshall counties, to Waterville, Kan., 150 miles. The directors are: C. S. Gleed, J. W. Gleed and D. E. Palmer, of Topeka; Thomas Norton, Chicago; R. Spring, Boston, Mass.

WATERVILLE & WISCASSET.—Bids are asked until Jan. 20 for the grading of the roadbed of this line. Address the Richmond & Potomac Construction Co., 93 Main St., Waterville, Me. Chas. H. Cooke, Ch. Engr.

STREET AND ELECTRIC RAILWAYS.

BIDDEFORD, ME.—Surveys are to be made in the first part of February for the Saco River Electric R. R. between this city and Bar Mills, 22 miles. Edward F. Walker, Pres., Girard Bldg., Philadelphia, Pa.

BELLOWS FALLS, VT.—Reports state that part of the contracts have been let for constructing the proposed Bellows Falls & Saxtons River Electric Ry., from Bellows Falls to Rockingham, via Westminster, six miles. The line is expected to be in operation by June 1. J. H. Holton, Pres., Burlington, Vt.

ATTLEBORO, MASS.—Steps have been taken towards the construction of the proposed electric line to be built from the terminus of the Norton & Attleboro line to Taunton, and to Pawtucket by the Bristol County Electric Ry. Co. The promotors are Alonzo N. Brownell, Eustace V. Carpenter, Emmons D. Guild and Edward A. Sweeney, of Attleboro, and others.

BOSTON, MASS.—The Boston Elevated Ry. Co., 101 Milk St., will receive bids until Jan. 24 for the construction of the Dudley St. terminus, including loop and transfer station. The transfer station must be completed by Aug. 1.

BROCKTON, MASS.—The Brockton & Plymouth St. Ry. Co. has been organized with a capital stock of $150,000, to construct an electric line from the terminus of the Brockton St. Ry., in Whitman, to Plymouth, via Hanson, Pembroke, Halifax, Plympton and Kingston. The distance is about 18½ miles, and the gage will be 4 ft. 8½ inches. The directors are: John P. Morse and Horace B. Rogers, of Brockton; E. J. B. Huntoon, Canton, Mass.; Horatio F. Copeland, Whitman; Oscar L. Gurney, South Hanson.

SOMERVILLE, MASS.—The Boston Elevated Ry. Co. has filed petitions in Somerville and Medford asking for locations for double tracks from Powder House Park, in West Somerville to the West Medford station.

WAYLAND, MASS.—George B. Howe and others have petitioned the selectment to grant a franchise to the Natick & Cochituate Electric St. R. R. Co to extend its tracks from Cochituate to the Boston & Maine R. R. station at Wayland centre. A hearing will be given on Jan. 22.

SYRACUSE, N. Y.—The East Side Traction Co. was incorporated in New York Jan. 14 with a capital stock of $400,000. The directors are: William G. Tracy, George D. Chapman, C. M. Warner and others, of Syracuse.

PRINCETON, N. J.—The Princeton & Trenton Traction Co. was incorporated in New Jersey Jan. 14 with an authorized capital stock of $200,000. It is formed to build a trolley line between Trenton, Princeton and Lawrenceville. The incorporators are: Geo. A. Vanderbilt, Princeton; Julius Garst, Elmer E. Carpenter and Harry F. Lincoln, Worcester, Mass.; Charles W. Shippee, Boston.

ROSELLE, N. J.—A hearing will be given Jan. 24 to consider the application of the Westfield & Elizabeth St. Ry. Co. for a franchise. Work is expected to begin next spring. A. A. Gaddis, Pres., Westfield, N. J.

EASTON, PA.—We are informed that no definite plans have yet been made regarding the construction of the proposed street railway of the Easton & Nazareth St. Ry. Co., incorporated Dec. 30, with a capital stock of $60,000. Wm. O. Hay, Pres., Easton.

SPRING CITY, PA.—This town has granted a franchise to the Montgomery & Chester Traction Co., and a line will soon be built from Phoenixville to this place. Geo. F. P. Wanger, Ch. Engr., Pottstown, Pa.

WASHINGTON, D. C.—The Hevner Construction Co., of Philadelphia, was awarded the contract Jan. 12, for constructing and equipping the Washington & University Electric Ry., which is to run from Wisconsin Ave. west and north past the American University to the District line. Work is expected to be completed about June 15. J. D. Croissant, Pres., Washington.

LYNCHBURG, VA.—J. G. Payn, Secy. of Virginia Paving Brick Co., Lynchburg, informs us that his company has the contract for constructing and equipping three miles of electric railway for the Lynchburg Ry. & Light Co., as previously reported, and that the materials are now being bought. R. Taylor Gleaves, Ch. Engr., Lynchburg, Va.

BIRMINGHAM, ALA.—A. T. Mehaffey & Co. are stated to have received the contract for grading the new Behren's Park line for the Birmingham Ry. & Electric Co.; work to be completed about March 1.

CHATTANOOGA, TENN.—The Chattanooga Rapid Transit Co. was incorporated Jan. 10 with a capital stock of $125,000, to construct an electric line to the mining districts near Rossville, Ga. S. W. Divine, Pres.

CLEVELAND, O.—The Cleveland & Warren St. Ry. Co., of Cleveland, was incorporated Jan. 10 with a capital stock of $10,000, to build through Cuyahoga, Geauga, Portage and Trumbull counties. The projectors are: S. A. Thrope, J. B. Corbett, E. B. Lockwood, J. E. Phelps and Martin Dodge.——Press reports state that the Chagrin Falls & Eastern Electric R. R., which is now under construction, will form part of a through electric line between Cleveland and Pittsburg, Pa. R. S. Hubbard, Pres., Cleveland.

DELAWARE, O.—E. G. Sullivan, of Columbus, O., is reported to be promoting a new electric railway to be built between Delaware and Columbus.

HARTFORD CITY, IND.—It is reported that sufficient capital has been secured to secure the right of way and make necessary surveys for the proposed line from Hartford City to Noblesville, via Wheeling, Alexandria and Perkinsville. A. J. Applegate, of Perkinsville; and R. H. Hannah, of Alexandria, are interested.

SAGINAW, MICH.—The Saginaw Valley Traction Co., which includes the Inter-Urban, Union and Consolidated street railway companies, has been organized with a capitalization of $1,000,000. The power for the entire system will be furnished by the old Inter-Urban power house at Carrollton. The new company will make many improvements, among them being a new bridge at Bristol St., and new tracks will be laid where necessary, and new equipment added. Homer Loring, Pres., Boston, Mass.; M. Richardson, Supt.

BELLEVILLE, ILL.—The council granted a franchise to the Belleville City Electric Ry. Co. Jan. 6 for the construction of an electric line on North Illinois St.

EAST ST. LOUIS, ILL.—The commissioners of St. Clair county granted a 20-year franchise to the Mississippi Valley Electric Ry. Co. Jan. 7 to build a line from East St. Louis to Alton, via Caseyville, Collinsville and Edwardsville. Chas. E. Carroll, Pres.; John H. Mehling, Vice-Pres., 1449 North 6th St., St. Louis, Mo.

EAU CLAIRE, WIS.—We are informed that the Chippewa Valley Electric Ry. Co. has just put in a 4-track crossing over the Chicago & North Western Ry. Co.'s tracks in this city, thus completing the Inter-Urban line between Eau Claire and Chippewa Falls, making a line 20 miles long, divided as follows: 7 miles in Eau Claire, 10 miles between Eau Claire and Chippewa Falls and 3 miles in Chippewa Falls. Work was begun in May, 1898. All rails in the city streets are 70-lb. T, and between cities, 60-lb. T rails are used. The heaviest grade is 1%, except in city streets; ties are of oak and tamarac. This is said to be one of the best inter-urban electric railways in the West. C. A. Alderman, Ch. Engr., Eau Claire.

NEENAH, WIS.—This city is said to have granted a franchise to the Citizens' Traction Co., of Oshkosh, for the construction of an extension to Neenah. E. E. Downs, Gen. Mgr., Oshkosh, Wis.

SKYKOMISH, WASH.—Reports state that the Great Northern Ry. is considering a proposition to operate its Cascade division, from Leavensworth to Skykomish, 65 miles, by electricity. The power will be generated by the falls of Trumwater Canon.

RATHDRUM, IDAHO.—The commissioners of Kootenai county have granted a franchise to the Rathdrum & Spirit Lake Transportation Co. to build an electric railway between Rathdrum and Spirit Lake. Surveys have been made, and work is expected to begin soon. Steam power, it is said, will first be used. Frank Lavigne is one of the promotors.

WARDNER, IDAHO.—W. W. Woods, a director of the Wardner & Kellogg Electric Ry. Co., informs us that surveys have been made and the right of way partly obtained for this proposed line from Kellogg to Wardner and from Kellogg to Government Gulch, 7½ miles. The capital for construction has not yet been secured. B. Prisley, Pres., Wardner; Geo. R. Trask, Ch. Engr., Wallace, Idaho.

MEXICO, MEX.—We are informed that Ramon Moranda y Marron is at the head of a representative board of capitalists which is considering the advisability of constructing a new tramway to the suburban town of Tacubaya. The coaches will be of the latest type, but it is not yet decided whether steam or animal motive power shall be adopted.

ELECTRIC LIGHT AND POWER.

ATHOL, MASS.—The controlling interest in the Athol Gas & Electric Light Co. has been purchased by Geo. D. Bates, W. D. Luey and W. D. Smith. The capital stock will be $40,000. It is said that no changes are contemplated at present. F. R. Davis, Mgr.

LACONIA, N. H.—Bids are asked until Jan. 30 for lighting the streets of this city for five years with electricity or Welsbach lights, as stated in our advertising columns. S. C. Frye, Cy. Clk.

AMSTERDAM, N. Y.—The Amsterdam Arc Light Co. proposes to increase the capacity of its light plant. E. F. Seixas, Mgr.

BUFFALO, N. Y.—The board of directors of the Buffalo Library proposes to install a plant at a cost of about $5,000.

FORT ANN, N. Y.—E. L. Ashley, Glens Falls, N. Y., has been awarded the contract for lighting this village for three years. The power will be secured from the plant at Kanes Falls.

JOHNSTOWN, N. Y.—Bids are asked by the city clerk until Feb. 6 for lighting the city with electricity.——Gen. W. F. Lansing, Little Falls, N.Y., is reported to have been granted a franchise for electric lighting.

NIAGARA FALLS, N. Y.—The Niagara Falls Power Co. has awarded a contract for two 5,000 HP. turbines and two 8,000 HP. generators.

RENSSELAER, N. Y.—The Kinderhook Electric Light & Power Co., recently purchased by the Hudson Transit Co., has let contracts for building the new power house. Ex-Gov. Roswell P. F. Flower is interested. Matthew A. Heeran, Supt.

ORANGE, N. J.—Alderman John L. Davis is urging the council to construct a plant in connection with the waterworks.

BELLEFONTE, PA.—The council is reported as considering the question of building a municipal plant.

PITTSBURG, PA.—The property of the Monongahela Valley Electric Co. has been sold to a syndicate for about $100,000. Local papers state that the new owners will extend the plant.

YORK, PA.—Bids are asked until Feb. 10 for lighting the city with electricity for one year, from April 1. Jos. Parkhurst, Chn. Com.

WILMINGTON, DEL.—The street and sewer department is considering the question of building a municipal plant.

WASHINGTON, D. C.—The United States and the Potomac electric lighting companies have applied for permission to extend its lighting conduits within the fire limits of the district.

ANNAPOLIS, MD.—The secretary of the navy received the following bids Jan. 12 for constructing the power house at the naval academy; the bids, however, are in excess of the appropriation of $100,000:

Bidder.	Complete.	If enameled brick is used add	If coal hoisting tower is used in connection add	Time, months.
Doyle & Doak, Phila.....	$158,945	$1,400	$6,300	12
Jno. J. Hoffer & Co., N. Y..	169,476	600	5,850	12
Grace & Hyde, 42d St., N.Y.	114,000	750	4,000	12
Gill & Sons, New Court-house, Balti.,	$132,129 to 142,427	500	5,442	8
Wm. H. Ellis, Washington.	123,000	850	3,225	—
J. Peirce, Beekman St., N.Y.	132,287	780	3,641	12
Structural Iron Co., Balt...	133,000	1,600	6,000	9
Woodbury & Leighton,†...	129,616	600	6,481	*250
W. Gray & Sons, Phila....	140,900	2,500	5,800	12
P. J. Carlin & Co., B'klyn	$116,900 to 126,280	762	4,900	12
Henry Smith & Sons, Balti.	132,600	1,250	5,800	12
Geo. Mann, Baltimore.....	124,000	1,400	5,000	*270

*Working days. †Boston, Mass.

HAGERSTOWN, MD.—The Western Maryland R. R. Co. has decided to establish a plant at its yards in this city.

WILLIAMSPORT, MD.—We are informed that the council will receive bids in 30 days for furnishing the materials and for constructing a plant and water-works to cost $20,000. There will be required dynamos, boilers, six miles of 3-wire, line, etc. Plans prepared by D.G. Adelsberger, 722 Pennsylvania Ave., Baltimore, have been adopted by the council. Judge P. L. Lemen and Jno. H. Hoffman are on the committee.

NEWPORT NEWS, VA.—The Peninsula Electric Light & Power Co., it is stated, proposes to purchase new machinery at a cost of about $20,000. This company has the city contract. E. C. Hillyer, Pres. and Mgr.

COLUMBUS, GA.—The Columbus Power Co. has voted to increase its capital stock from $100,000 to $200,000.

GURLEY, ALA.—It is reported that J. M. Roberts proposes to build a plant here.

ATHENS, TENN.—W. R. Hall, Pres. Athens Electric Light Co., Chattanooga, Tenn., writes us that arrangements for the proposed plant for this place are not yet complete. Reports state that the plant must be in operation by June 1.

BROWNSVILLE, TENN.—This place voted Jan. 6 to issue $38,000 in bonds for a plant, water-works, etc. W. M. Crandall, Mayor; T. B. King, Chn. Com.

CIRCLEVILLE, O.—Henry R. Heffner, Wm. Heffner and H. S. Heffner have asked for a 10-year franchise to operate a plant. The council will submit the question to a vote of the people April 3.

DAYTON, O.—We are informed that the city engineer is securing information in relation to cost of a municipal plant. A report will be submitted to the council by the city engineer and the special committee. Information is wanted at once on the expense necessary to equip a plant with a capacity to furnish 600 2,000-c. p. arc lights and also for furnishing 1,000 2,000-c. p. lights. The question of issuing bonds for the plant will have to be submitted to a vote of the people. John A. Hahne, Cy. Clk., and Chas. E. Pease may be addressed. F. M. Turner, Cy. Engr.

SIDNEY, O.—P. F. Sarver, Pres. Council, writes us that there is a resolution before the council authorizing the city to build a plant. Further information may be secured about April 1.

SPRINGFIELD, O.—The board of Snyder Park commissioners has accepted plans for a plant for the park, to cost $7,000. Work will probably begin in April.

WOODSFIELD, O.—Bids are asked until Feb. 7 for furnishing the materials and for constructing a plant. It will have a 1,000 light alternater dynamo and 12 transformers, a 40 light arc dynamo, switchboard, etc. W. H. Pelton, Engr., 806 Cuyahoga Bldg., Cleveland, O.; Geo. P. Dorr, Clk.; T. A. Way, Mayor.

DETROIT, MICH.—The public lighting commission has asked for money to purchase the following machinery: Three engines and arc dynamos, direct-connected, complete, $16,500; two engines and alternators, direct-connected, $21,500; lines for 100 arc lamps, $6,150; 100 arc lamps and switches, $2,000; cost of operating 100 additional arc lights, $50—$5,000. D. W. Simons, of the commission, may be addressed.

MENOMINEE, MICH.—The Menominee Electric Light, Ry. & Power Co. proposes to spend about $15,000 in improving its plant. It is said that work will be begun as soon as the weather permits. E. Daniell, Mgr. and Supt.

STURGIS, MICH.—Chas. A. Sturges, Mayor, writes us that the contract for constructing the proposed plant was let on Jan. 11 to the Chase Construction Co., 113 Majestic Bldg., Detroit, Mich. The plant will have a capacity for 75 2,000-c. p. arc and 1,500 16-c. p. incandescent lights; estimated cost, $15,000. Frank B. Rae, Engr., Fort Dearborn Bldg., Chicago, Ill.

CHICAGO, ILL.—Bids are asked until Jan. 24 for furnishing and placing in position 33 electric lamps on South Oakley Ave. Anton Petersen, Pres. Bd. Local Improvements of the West Chicago Park Comn.; E. G. Schubert, Secy.——Work will soon be begun on the proposed plant for stock yards of Armour & Co. Bids for the steel work are reported as now being received. Chas. F. Hall, Engr.

PANA, ILL.—Robert Johns, Mgr. and principal owner of the Modern Electric Light Co., has purchased the franchise and entire equipment of the Consumers' Electric Light Co. for $10,000.

SENACA, ILL.—This place held an election Jan. 17 to vote on the question of issuing $50,000 in bonds for a plant. Jas. F. Farrell, Village Pres.

WOODHULL, ILL.—The council, it is stated, wants to grant a franchise for a plant and water-works.

MARSHFIELD, WIS.—The council has decided to ask for new bids for lighting the streets with 28 arc lights. The bids received Oct. 1, at $100 a light a year, were considered too high. J. H. Thomas, Cy. Clk.

SUPERIOR, WIS.—Press reports state as follows: Surveys are being made of the Black Amnicon and Brule rivers, Douglas county, Wisconsin, for the New York Water Power Development Co., whose object is the establishment of power stations and the supplying of electricity to Superior, Wis., and Duluth, Minn., the scheme being similar to the Jay Cooke plan for the St. Louis River.

MILTON, IA.—This place is reported to have voted, Jan. 4, to grant a franchise to the Southern Iowa Electrical Co. W. H. Boyd, Cy. Clk.

NEW LONDON, IA.—It is stated that Frank Williams, Danville, Ia., has decided to abondon the project of building a plant, on account of not being able to secure enough subscriptions for lights.

RED CLOUD, NEB.—It is reported that a movement is being made to re-establish a plant here.

BRITTON, S. DAK.—It is proposed to build a plant in this place.

HURON, S. DAK.—H. C. Sterling writes us that he only intends to put in a steam plant of 100 HP. at the electric p.ant.

GALVESTON, TEX.—Bids are asked until Feb. 16 for electric installation in gun and mortar batteries at Fort Point, Galveston, as stated in our advertising columns. Capt. C. S. Riche, U. S. Engr., Galveston.

PORTLAND, ORE.—The question of the city owning the plant is being considered by the council. The city spends about $83,000 a year for lighting. H. W. Corbett, Chn.; J. N. Teal and P. A. Dolph are on the committee.

LOS ANGELES, CAL.—The stockholders of the Los Angeles Lighting Co., 457 South Broadway, will hold a meeting March 9, to vote on the question of increasing the bonded indebtedness to $1,000,000. R. M. Adams, Secy.

RIVERSIDE, CAL.—Harry S. Edwards has filed claims to 6,000 and 5,000 ins. of water of the north and south forks of the Whitewater River. Water will be furnished for power by means of tunnels, flumes, canals and ditches, four by six feet in diameter.

SAN FRANCISCO, CAL.—The Mutual Electric Light Co. has notified the supervisors of its intention to begin laying wooden conduits for electric cables and constructing the necessary manholes in the following streets: Beginning at the corner of Larkin and McAllister Sts., thence by Larkin to Market, to Valencia, to 14th. The company has also filed a bond of $5,000.

SAN LEANDEO, CAL.—The board of trustees has refused to grant a franchise for a plant to Edwin Fisher, because the town some time ago voted to issue $10,000 in bonds for a municipal plant.

GUANAJUATO (GUANAJUATO), MEX.—It is stated that a company has been organized to build a plant in this city. There is at present a plant owned and operated by the state. Population, 53,000.

MONTEREY (NUEVO LEON), MEX.—Press reports state that La Compania de Luz Electrica y Fuerza Mortriz de Monterey proposes to make additions to its plant so that it may furnish power for all purposes. Population, 56,855. R. Dysternd, Mgr.

LONDON, ENG.—Bids are asked until Jan. 31 for furnishing and erecting four continuous-current dynamos, one motor-generator, two switchboards with switches, measuring instruments, and other work required for the proposed Victoria-embankment electric lighting station in the parish of Saint Martin-in-the-Fields, for the London county council, County Hall, Spring Gardens, London.

BRIDGES.

RUTLAND, VT.—Bids will be opened by the Rutland-Canadian R. R. Co., Jan. 31, for about 50 miles of work north of Burlington, Vt., including a line across Lake Champlain, as is stated in our advertising columns. The work will include considerable bridge construction, the bridge superstructures to be erected by the railway company. John W. Burke, Ch. Engr.

BOSTON, MASS.—Bids are asked until 12 m., Jan 20, for building the trucks for the draws of the bridge on Summer St. extension. William Jackson, Cy. Engr.——It has been decided to construct the proposed bridge to South Boston on the extension of Cove St.

LYNN, MASS.—The Lynn & Saugus Ry. Co. has petitioned the harbor and land commissioners for approval of plans for a bridge over Saugus River, between Saugus and Lynn.

BATAVIA, N. Y.—E. E. Leavenworth, Justice of the Peace, informs us that he does not think that the proposed bridge over the railroads at Jackson St. will ever be built.

BUFFALO, N. Y.—Bids are asked until Jan. 26, for constructing two superstructures over Buffalo River and one over Cazenovia Creek; removing the Abbott Road bridge to South Ogden St.; constructing abutments, piers and wing walls of bridges over the Buffalo River at Abbott Road and Bailey Ave.; abutments and wing walls of bridges on South Ogden St., over Buffalo River and South Park Ave., over Cazenovia Creek. R. G. Parsons, Secy.

BUFFALO, N. Y.—Reports state that the proposed bridge work for this year will cost the city about $221,375, and the railroads about $569,605. Edward B. Guthrie, Engr. Grade Crossing Comn., 436 Ellicott Square.

CAMILLUS, N. Y.—A bill has been introduced in the state legislature for a new bridge over the Erie Canal, to cost $6,000.

SYRACUSE, N. Y.—Assemblyman Delaney has presented a bill for an appropriation of $6,000, for a steel girder bridge over Onondaga Creek, at West Fayette St.

SEWICKLEY, PA.—The Ohio Valley Ry. Co., recently incorporated, has applied for a charter to construct a bridge over the Ohio River, between Sewickley and Coraopolis; A. P. Kirkland, Pres.; S. L. Brock, Secy., and W. T. Wallace, Treas., all of Pittsburg.

WASHINGTON, D. C.—Col. Chas. J. Allen has estimated the cost of rebuilding the Long Bridge, at about $2,953,000.

BALTIMORE, MD.—The Baltimore & Ohio R. R. Co. has awarded the following contracts: The Youngstown Bridge Co., Youngstown, O., for 31 bridges on the Central Ohio Division, between the Ohio River and Newark, O.; the Pencoyd Iron Works, 261 South Fourth St., Philadelphia, for 11 bridges, on the Lake Erie Division, between Newark, O., and Sandusky, O.; the Edge Moor Bridge Works, Wilmington, Del., for nine bridges on the Chicago Division. The estimated cost is $300,000.

ELLICOTT CITY, MD.—The Baltimore Consolidated Ry. Co. has awarded a contract to Albert Weber, for constructing the abutments of the new bridge. Nelson Perin, Pres.

BROOKHAVEN, MISS.—F. May, Chancery Clk., informs us that the following bids were received Jan. 3, for constructing a steel bridge over the Homochitto River:

Geo. H. Crofts, Atlanta, Ga.	$7,700
New Columbus Bridge Co., Columbus, O.	8,125
New Jersey Steel & Iron Co., Trenton, N. J.	7,350
Indiana Bridge Co., Muncie, Ind.	7,492
C. L. Horton, Austin, Tex.	7,600
A. M. Blodgett, Kansas City, Mo.	7,997
Southern Bridge & Construction Co., Houston, Tex.	8,250
St. Louis Bridge & Iron Co., St. Louis, Mo.	7,900
Youngstown Bridge Co., Youngstown, O.	7,500
Southern Bridge Co., Birmingham, Ala.	7,465
Geo. E. King Bridge Co., Des Moines, Ia.	7,497
Groton Bridge & Mfg. Co., Groton, N. Y.	7,748

McMINNVILLE, TENN.—The county court has authorized the construction of two bridges over the Collis River. J. G. Biles, Frank Rust and Frank Hill compose the committee.

CLEVELAND, O.—Bids are asked until Feb. 4 for constructing the steel and iron superstructure of the Center St. bridge over the Cuyahoga River. Geo. R. Warden, Dir. Pub. Wks.——Engineer Pratt recommends the construction of six bridges for the improvement of the Brookway division of Rockefeller Park.

DAYTON, O.—Isaac W. Crampton, Engr., Dayton & Xenia Traction Co., writes us that a contract has been awarded to the New Castle Bridge Co., New Castle, Ind., for constructing a bridge of three spans over the Little Miami River, near Dayton.

HAMILTON, O.—A contract has been awarded to the Toledo Bridge Co., at $4,500, for repairing the High and Main St. bridge.

EVANSVILLE, IND.—Bids are asked by the county commissioners until Jan. 28 for constructing an abutment of the bridge over Little Pigeon Creek.

DETROIT, MICH.—Reports state that the Michigan Central, Wabash, Grand Trunk and Canadian Pacific railway companies have agreed to construct a bridge, to cost about $3,000,000, over the Detroit River.

GRAND HAVEN, MICH.—The county board of freeholders will submit a proposition to the people of Ottawa county to construct three bridges over the Grand River, between Grand Haven and Spring Lake, at Eastmanville and at Bridge St. ferry; estimated cost, $25,000.

JOLIET, ILL.—Bids are asked by the board of trustees, sanitary district of Chicago, 1,110 Security Bldg., Chicago, until March 15, for furnishing the material and constructing the substructure and superstructure of one railway bridge, 110 ft. span, and two highway bridges, one consisting of two 113-ft. spans and the other of 200 and 80-ft. span, over the Des Plaines River, as stated in our advertising columns. Jos. S. Haas, Clk.

DAVENPORT, IA.—The council has passed an ordinance to authorize the Chicago, Rock Island & Pacific Ry. Co. to construct a bridge across Third St. and two bridges across Fourth St., each for a single track.

DEER CREEK, MINN.—Bids are asked until Jan. 20, for constructing a bridge across Leaf River, according to reports. Fred. Bekbrack, Chn. County Supervisors, Fergus Falls, Minn.

CLAYTON, MO.—The St. Louis Bridge & Iron Co., St. Louis, Mo., has been awarded a contract, at $1,960, for constructing six iron bridges in this county.

DE SOTO, MO.—Bids are asked by the county commissioners, Hillsboro, Mo., until Feb. 6, for constructing a steel bridge, near Frumet, Mo. J. B. Dover, County Surveyor, De Soto, informs us that it will consist of one span 200 ft. long and 16 ft. wide, on tubular foundation.

YORK, NEB.—Bids are asked until Feb. 11 for constructing all wooden bridges in the county during 1899. J. D. White, County Clk.

HELENA, MONT.—Bids are asked until Feb. 2 for constructing a steel bridge 75 × 16 ft. Chas. J. Clark, Clk. County Comrs.

SAN FRANCISCO, CAL.—W. B. Storey, Jr., Ch. Engr. and Gen. Supt., 321 Market St., San Francisco, writes us that contracts have been let for the following bridges on the extension of the San Francisco & San Joaquin Valley Ry. Co. from Stockton towards San Francisco: One draw bridge 233 ft. between end pins, across San Joaquin River; one draw bridge 202 ft. and one girder 60 ft., across Middle River; and one draw bridge 202 ft. and one girder 45 ft., across Old River. Bids have been asked for the construction of a viaduct across Alhambra Valley.

CHATHAM, ONT.—Bids are asked until Jan. 24 for constructing a pin-connected steel truss bridge, 220 ft. span, and masonry abutments, over the River Thames. J. C. Fleming, County Clk., Chatham.

TORONTO, ONT.—Chas. H. Rust, Cy. Engr., writes us that it has been voted to appropriate $62,500, for the construction of a new bridge over the River Don, on line of Queen St., and to remove the existing bridge to Eastern Ave.

WINGHAM, ONT.—Bids are asked until 4 p. m., Jan. 21, for furnishing the material and constructing a wooden bridge 100 ft. long, on concrete abutments; capacity, 100 lbs. per sq. ft. John Ansley, County Comr., Wingham.

ASHCROFT, B. C.—Bids are asked until Jan. 23 for constructing a bridge over the Boneparte River, near Harper's mill. A. Stevenson, Supt. Wks., Lytton, B. C.

ALEXANDRIA, EGYPT.—Bids are asked by the inspector of irrigation, third circle, Alexandria, until Feb. 16, for constructing two swing bridges over canals, according to reports.

BUILDINGS.

BURLINGTON, VT.—Bids are asked until Feb. 5 for construction and installation of heating and ventilating apparatus for the Burlington High School. H. O. Wheeler, Supt.; W. R. B. Wilcox, Arch., Burlington.

BOSTON, MASS.—The following bids were received from local contractors, Jan. 3, for a heating and ventilating system for the Mechanic Arts high school building in this city: Ingalls & Kendricken, 80 and 82 Sudbury St., $4,653; Walworth Construction & Supply Co., 16 to 20 Oliver St., $4,393; Buerkel & Co., 28 Union Park St., $4,392; Evans, Almirall & Co., 178 Devonshire St., $4,383; Lynch & Woodward, 26 Beach St., $4,229; Albert B. Franklin, 165 and 167 Fort Hill Square, $4,067; Huey Bros., 35 Hartford St., $3,987; Isaac Coffin & Co., 52 Sudbury St., $3,972.

NORTHAMPTON, MASS.—Plans are being prepared, according to reports, for a new hotel building to be erected here for Joseph Hebert, of Northampton, at a cost of about $50,000. Bayley & Goodrich, Archs., Hartford, Conn.

NEW HAVEN, CONN.—Bids are asked by the board of charities, City Hall, until 10 a. m., Jan. 19, for a steam heating apparatus for the hospital buildings, at Springside Farm. F. G. Hotchkiss, Supt.; L. W. Robinson, 324 Exchange Bldg.

BATH-ON-HUDSON, N. Y.—The new school building at this station was destroyed by fire Jan. 13, causing an estimated loss of $25,000.

BROOKLYN, N. Y.—Plans are being prepared for a 6-story brick, stone and terra cotta theatre building, with roof garden, to be erected at Broadway and Flushing Ave.; reported cost, $175,000. Chas. Reinhard and others, of Brooklyn, owners; Hugo Smith and H. Schuster, Archs., 838 Broadway, Brooklyn.

MINEOLA (L. I.), N. Y.—It is reported that Nassau county will issue $150,000 in bonds for the erection of a new court house. Townsend Scudder, 16 Exchange Place, New York, may be addressed.

NEW YORK, N. Y.—The 7-story brick building at 144 to 150 Franklin St., occupied by the Cook & Bernheimer Co., dealers in liquors, was damaged by fire, Jan 11; reported loss, about $80,000.——Plans have been filed by J. & G. Schreiner, 104 West 123d St. for six 5-story brick flat and store buildings on 80th St., near 2d Ave., to cost $120,000. John Hauser, Arch., 1441 3d Ave.; by Walter S. Evans, 144 Stuyvesant Ave., for six 5-story brick tenement buildings, on 63d St., near West End Ave., to cost $108,000. Sam'l Sass, Arch., 23 Park Row; by William Evans, 48 East 134th St., for two 6-story brick flat and store buildings, at 387 and 389 10th St., to cost $50,000. M. Bernstein, Arch., 145 Centre St.; by Sebastian Sanders, 167 East 105th St., for four 5-story brick flat buildings, on 118th St., near 5th Ave., to cost $108,000. Schneider & Herter, Archs., Bible House.——Hartman & Horgan, 287 4th Ave., are said to have received the contract for improving the 6th. Precinct station house, at $4,969.

NEW YORK, N. Y.—Plans have been filed by Chas. W. Hall, 26 Cortlandt St., for a 12-story brick warehouse, with stores and offices, at 125th St. and Park Ave., to cost $311,000. C. P. H. Gilbert, Arch., 1123 Broadway; by Grand R. Pettit for a 7-story brick flat and store building at 819 and 821 Western Boulevard, to cost $150,000. Hill & Turner, Archs., 44 Broadway.

ONEIDA, N. Y.—It is reported that Dr. M. Cavana, of Oneida, will erect a new hospital building on Madison St., on the site now occupied by Sharp's Hotel.

NORWOOD STATION, PA.—It is announced that this borough intends to erect a town hall and fire house, and also to lay new streets, with the balance of its $30,000 loan.

PHILADELPHIA, PA.—Wm. F. Deakyne, 1,001 Chestnut St., is reported to have purchased the property at 10th and Clinton Sts., 100 × 115 ft., upon which he will erect a first-class apartment house.——Plans are being prepared by Wilson Bros. & Co., Drexel Bldg., for a stone, brick and steel building, to be erected for the Commercial Museum, at West Philadelphia, near Almshouse Lane; estimated cost, $200,000.——Bids are being received, according to reports, for marble and iron work, heating, elevators, etc., for a new 7-story brick and stone building, to be erected at 1,302 Filbert St., for Horn & Hardart. J. Franklin Stucket & Son, Archs., 49 North 13th St.——Plans are being prepared for five brick and stone store and dwelling buildings on Ridge Ave. and Elvin St., Falls of Schuylkill. Wm. F. Albrecht, Arch., Ridge Ave. and Diamond St.——Armstrong & Printzenhoff, Land Title Bldg., have been awarded the contract for the erection of the pleasure pavilion on the Chestnut St. wharf, Delaware River, at $85,300. Work will not be begun until about Feb. 15.

PITTSBURG, PA.—The directors of St. Paul's R. C. Orphan Asylum have decided to build a new orphanage, at a cost of $100,000. Rev. M. Lynch, Treas.

VILLANOVA, PA.—Bids are being received by E. F. Durang, Arch., 1,200 Chestnut St., Philadelphia, according to reports, for the erection of the new 4-story stone monastery buildings on the grounds of Villanova College, to cost about $200,000. Rev. J. J. Fedigan is interested.

WILMINGTON, DEL.—The following bids were received by the board of education, Jan. 8, for erecting the proposed high school building on Delaware Ave., near Madison St.: A. S. Reed & Bro. Co., $169,000, $5,000 deducted if Brandywine granite and Indiana linestone be used; William B. Austin, $170,575, to be completed by Aug. 1, 1900; Calvin J. Swayne, $171,927, 15 mos; $169,999 if Woodstock granite is used; $170,097 if light eastern granite is used; H. B. Seeds, $187,974, two yrs; John B. Johnson, $188,436; S. J. Newman, $190,781, 18 mos.; $4,750 deducted by using a certain kind of mill work, $450 off by using Reading hardware; William Johnson, $198,000.

WILMINGTON, DEL.—The following bids were received by the supervising architect, Washington, D. C., Jan. 16, for repairs to main pier house and gangway leading to boat house at the U. S. Quarantine station on Reedy Island, Del.; Delaware Construction Co., Wilmington, $2,666, 4 mos.; Wm. H. Verden, Lewes, Del., $1,979, 40 working days.

BALTIMORE, MD.—Henry Smith & Sons, of Baltimore, have been awarded the contract for building a new 5 and 8-story terminal warehouse at the Camden station of the Baltimore & Ohio R. R., to cost about $250,000. A 700-ft. train shed will also be erected.

WASHINGTON, D. C.—Andrew Carnegie, Pittsburg, Pa., has offered, through B. H. Warner, Vice-Pres. of the Washington Public Library, to give $250,000 for a new building, provided a site is given. A bill has been introduced in both houses, setting aside the reservation in front of Centre Market, near Pennsylvania Ave. and 7th St., for this purpose. Construction is to commence within six months and the building completed within two years.

ALEXANDRIA, LA.—Plans, specifications and bids will be received by the police jury of Rapides Parish until Feb. 22 for the erection of a jail building in this city, to cost between $15,000 and $25,000, complete. Address W. C. James, Pres. Police Jury, Boyce, La.

BUCKHANNON, W. VA.—Bids are asked by the Upshire county court, until Feb. 16, for the erection of a court house. D. C. Hughes, Supt., Buckannon; Harrison Albright, Arch., Charleston, W. Va.

COLUMBUS, GA.—Bids are asked until April 1, according to reports, for erecting a brick and stone opera house for Springer Bros., Columbus, to cost about $25,000. J. B. McElfatrick & Son, Archs., 1,402 Broadway, New York.

MEMPHIS, TENN.—A fire in this city, Jan. 12, damaged the retail drygoods house of the J. S. Menken Co., at Main and Gayoso Sts. Reported loss, $400,000; insurance, $345,000.

CLEVELAND, O.—Bids are asked by the board of control, until Feb. 4, for furnishing a heating and ventilating apparatus for the Children's Hospital, at the City Infirmary on Scranton Ave. Wm. J. Akers, Dir. Charities.

LIMA, O.—Plans have been selected, according to reports, for a new $40,000 high school building to be erected here. W. R. Brown, Arch., 222 West 4th St.

EVANSVILLE, IND.—Bids are asked, until Jan. 20, for rebuilding the St. George Hotel for Fred. Van Ormer, to cost about $60,000. Harris & Shopbell, Archs.

PERU, IND.—The commissioners of Miami county have accepted the plans of the Pauly Jail Building Co., of St. Louis, for a new sheriff's residence and county jail, to cost about $20,000.

CALUMET, MICH.—Bids will soon be received, according to reports, for erecting a new opera house, to cost about $30,000. J. C. Shand, Arch.

CENTERVILLE, MICH.—The supervisors of St. Joseph county have passed a resolution to submit a proposition to the voters to raise $36,000 by taxation, for a new court house.

CHICAGO, ILL.—W. A. & E. A. Wells have been awarded the contract for the erection of a 3-story building, 100 × 100 ft., to be erected at 25th St. and Armour Ave., at a cost of about $75,000. It will be occupied by Bauer & Black as a chemical laboratory. Holabird & Roche, Archs., Monadnock Block.

CHICAGO, ILL.—We are informed that bids will be received until Jan. 25 for erecting a 4-story and basement brick, wood and iron warehouse building, 60 × 185 ft., for the Graham & Morton Transportation Co., to cost about $35,000. There will be no power plant; two electric and two hydraulic elevators will be used. George Beaumont, Arch., 115 Dearborn St., Chicago.

MOLINE, ILL.—The proposition of issuing $25,000 in bonds for the erection of a $25,000 school building will be considered by the voters at the next election in April. C. H. Boman, Chn. of Bldg. Com.

BALSAM LAKE, WIS.—The following bids were received Jan. 3, for erecting a new court house, jail and residence; H. P. Burdick, Secy. County Comrs.:

H. F. Cowdin, Superior, Wis	$25,000
P. H. Donavon & Son, St. Paul, Minn	25,291
R. A. Long, St. Paul, Minn.	22,740
Libby & Co., Minneapolis, Minn	21,250
Donlin & Cullen, West Superior, Wis	19,984
Charles Skoglun, St. Paul, Minn.	19,975
N. P. Fransen, St. Paul, Minn.	19,850
McLeod, Campbell & Smith, Duluth, Minn.	19,375
A. Brown, New Richmond, Wis.	17,965
Fred C. Norlander, St. Paul, Minn. (accepted)	17,487

The following bids were received for the heating apparatus:

O'Neil & Sons	$1,345
Roberts-Goss Co., St. Paul, Minn.	1,340
Tunstead Heating Co., Minneapolis, Minn.	1,440
Allan Black & Co., Minneapolis, Minn. (accepted)	1,295
J. P. Fox, Eau Claire, Wis.	1,292
American Heating Co., Duluth, Minn.	1,285

DARTFORD, WIS.—The commissioners of Green Lake county, Jan. 10, decided to tear down the present county buildings and to erect a new $15,000 court house and a $10,000 jail and sheriff's residence; work to be completed by Oct 15. Wm. Waters, Arch., Oshkosh, Wis.

ABERDEEN, S. DAK.—The commissioners of Brown county have decided to build a new brick jail, 35 × 52 ft. and 21 ft. high, with three tiers of cells; estimated cost, $12,500.

AUGUSTA, MONT.—Bids are asked until Feb. 1 for erecting a jail building in this town for Lewis and Clarke counties. Chas. J. Clark, Clk.

ARKADELPHIA, ARK.—Bids are asked until about March 1, acording to reports, for a new court house for Clark county; estimated cost, about $35,000. J. H. Crawford, Chn.; Chas. L. Thompson, Arch., Little Rock, Ark.

MARLIN, TEX.—The Arlington Hotel and Sanitarium, at Marlin, was burned Jan. 15, causing a loss of about $60,000, with $20,000 insurance.

SPOKANE, WASH.—It is reported that Victor Dessert will erect a 3-story building, 55 × 155 ft., in the spring, to cost about $35,000. Preusse & Zittel, Archs.

ALBANY, ORE.—Edward Killfeather, Portland, Ore., was the lowest bidder for remodeling the Linn county court house, at $13,519.

FRESNO, CAL.—Bids are asked until Feb. 6, for the erection of a new brick church building for the First Christian Church. Alexander Gordon, Chn. of Bldg. Com.

SAN JOSE, CAL.—Reports state that the St. James Hotel will be improved at a cost of about $70,000. Jas. S. Campbell, Owner; D. C. Hakey, Mgr.

BRIDGEWATER, N. B.—A fire in this town Jan. 12, destroyed a large number of business buildings. Reported loss, $200,000; insurance, $60,000.

ST. THOMAS, ONT.—Bids are asked until Jan. 25, for the hot water heating and plumbing required in the court house for Elgin county. K. W. McKay, County Clk.; N. R. Darrach, Arch., Talbot St.

DIGBY, N. S.—St. Ann's College was destroyed by fire Jan. 16, causing a reported loss on the building of about $75,000.

BRADFORD, ENGLAND.—Competitive plans are asked until April 14, for a building for the Cartwright Memorial Hall and Art Gallery; premiums, £150 ($750), £100 and £50. Estimated cost of building, £38,000. George McGuire, Town Clk.

WATER-WORKS.

FAIRFIELD, ME.—This place has voted to join with Waterville, Benton and Winslow in petitioning the legislature to pass a bill authorizing the formation of the Kennebec Water District. V. R. Connor, E. Kelley and H. F. Burgess may be addressed.

SOUTH PARIS, ME.—The legislature has been asked to grant a charter to the South Paris Water Co.

ATTLEBORO, MASS.—L. Z. Carpenter, Supt. Water-Wks., writes us that nothing can be done toward getting a new pump until after the town votes upon the question at the annual town meeting in March.

BOSTON, MASS.—Bids are asked until Jan. 25 for furnishing the city with 5,500 tons of cast-iron water pipe, as stated in our advertising columns. Jno. R. Murphy, Water Comr., City Hall.

BROCKTON, MASS.—The question of an increased water supply for this city is being considered. The legislature will probably soon be asked to grant the council permission to make the improvement.

PROVIDENCE, R. I.—Otis F. Clapp, Cy. Engr., writes us that the question of water filtration is before a committee of the council. Plans for both natural and mechanical filtration have been presented to the committee, but so far it has not reported on them.

DUNKIRK, N. Y.—Dr. Frank P. Vandenberg, Erie County Bank Bldg., Buffalo, Pres. Great Western Clear Spring Water Co., has submitted a proposition to furnish this city with a new water supply from Bear Lake, 12 miles distant.

JAMAICA (L. I.), N. Y.—The Montauk Water Company has filed plans for the erection of a steel water tower on Borden Ave., 120 feet west of Oliver St., Long Island City, at a cost of $11,500. The tower is to be 39 ft. in diameter and 80 ft. in height. The water company furnishes water for the Long Island R. R. Co. and for manufactories at Blissville.

LOCKPORT, N. Y.—The council has received a proposition from Dr. F. P. Vandenbergh, Pres. Crystal Springs Water Co., Buffalo, to furnish this city with a new water supply from Crystal Lake, Cattaraugus county. This company proposes to furnish water to a number of towns in this section of the state, among them being Arcade and Fredonia. We are informed that nothing definite for extending the water supply of this city has been agreed upon.

SWEDESBORO, N. J.—H. W. Ridgway, Secy., writes us that the new company, which will soon put in an electric light plant, expects to erect works in the spring.

VAILSBURG, N. J.—The council has awarded the contracts for furnishing the materials for the proposed works, as advertised in Engineering News, as follows: Pipe and specials, M. J. Drummond & Co., 192 Broadway, New York; hydrants and valves, Rensselaer Valve Co., Troy, N. Y. A. Costa, Orange, N. J., submitted the lowest bid, Jan. 11, for doing the work. The New Jersey Sprinkling & Contracting Co. submitted the next lowest bid. Estimated cost of construction, $13,000. E. A. McMurray, Borough Engr., 22 Clinton St., Newark.

PHILADELPHIA, PA.—It is stated that as a move toward a pure water supply for this city Director of Public Works Thompson has submitted to councils an ordinance providing for the construction of five filtration plants and their appurtenances, with a total capacity of 270,000,000 gallons daily. The slow sand system is recommended for three of the plants and mechanical filtration is suggested for the other two plants. The plan contemplates an appropriation of $9,325,000.

PHOENIXVILLE, PA.—Press reports state that this borough may be compelled to seek a new source for a water supply.

PITTSBURG, PA.—The T. A. Gillespie Co., Westinghouse Bldg., Pittsburg, has been awarded the contract for laying the new 40-in. water main at $74,940. The total bids were given in our issue of last week.

SPRINGBORO, PA.—The question of building works at a cost of about $7,000 is being considered.

WILMINGTON, DEL.—The question of building a new stand-pipe, 35 × 75 ft., is being considered by the Commission; estimated cost, $10,000.

BALTIMORE, MD.—Bids are asked until Jan. 25 for furnishing and delivering such brass and gunmetal castings as may be required by the water board of the city during the year ending Dec. 31. Owing to the nature of the materials to be furnished and the manner of delivery required, only bids from manufacturers located in Baltimore or immediate vicinity will be considered. Wm. L. Kenly, Ch. Engr. Water Bd.——Bids are asked until Jan. 30 by the Tuxedo & Embla Parks Water & Light Co. for furnishing the materials and for constructing works for supplying water to the Tuxedo and Embla Parks districts. (Postponement from Jan. 15.) D. G. Adelsberger, Engr., Baltimore; G. O. Wilson, Pres., 212 North Liberty St.

CHESTERTOWN, MD.—The commissioners have decided to offer Chas. T. Westcott, Pres. Chestertown Water Co., the sum of $21,000 for the works. Mr. Westcott has asked $23,000. J. S. Bradley, Samuel Vanwort and T. W. Eliason are on the committee.

LAUREL, MD.—It is proposed to organize a company to build works for this place at a cost of about $30,000. There will be required a reservoir, pumping station at Brashears Springs, two miles from town. D. G. Adelsberger, 722 Pennsylvania Ave., Baltimore, Md., prepared the plans.

WILLIAMSPORT, MD.—We are informed that bids will be asked in about 30 days for building the proposed works and electric plant to cost about $20,000. Steam pumps, water tower and six miles of pipe will be required. D. G. Adelsberger, Engr., 722 Pennsylvania Ave., Baltimore.

COLUMBUS, MISS.—Bids are asked until Feb. 7 for the purchase of $70,000 of 20-year 5% bonds for extending the water-works and for building sewers. W. D. Humphries, Mayor.

BROWNSVILLE, TENN.—This place has voted to ask the legislature for permission to issue $38,000 in bonds for improving the works, constructing an electric plant, etc. The committee consists of S. F. Thomas, Mann Wills and Thos. B. King. W. W. Crandell, Mayor.

FAYETTEVILLE, TENN.—We are informed that plans for works are being prepared by Walter G. Kirkpatrick, Jackson, Miss. The supply will be from mountain springs, gravity-flow to distributing reservoir, with cast-iron pipe and all taps metered. J. E. Poindexter, Clk.

GREENVILLE, TENN.—An election will be held Jan. 24 to vote on the question of purchasing the works owned by H. Reaves.

SOUTH BEND, IND.—M. S. Rogers, Supt. Water Dept., writes us that the following bids were received Jan. 11 for furnishing two 150-HP. water-tube boilers in one battery for the water-works:

Matthews Steam Boiler Works Co., South Bend.	$3,475
Abendroth & Root Co., Chicago, Ill.	3,410
Aurora Boiler Works, Aurora, Ill.	3,250
†Heine Safety Boiler Co., Chicago, Ill.	2,755
*Babcock & Wilcox Co., Chicago, Ill.	2,773

*Awarded contract; board and traveling expenses of erecting engineer to be paid by seller. †Board and traveling expenses of erecting engineer to be paid by purchaser. All bids f. o. b. cars, South Bend, ready for erection. Foundation furnished by purchaser.

BARNESVILLE, O.—The council is reported as securing information from C. E. Millar, Wheeling, W. Va., for works. It is undecided whether to build municipal works or to grant a franchise, which has already been applied for.

CUYAHOGA FALLS, O.—An election will be held Feb. 18 to vote on the question of building works to cost about $60,000.

BAY CITY, MICH.—The committee has reported against the proposed construction of a new intake pipe to West Bay City.

HARTFORD, MICH.—We are informed that bids for furnishing the material and for constructing the proposed works will be received about the last of February. There will be required a stand-pipe 12 × 100 ft., or a 50,000-gallon tank on a 70-ft. tower; steam or triplex pumps of 500,000 gallons a day against a pressure of 80 lbs. and 150 lbs. direct fire pressure, 2½ miles of cast-iron or steel pipe, a brick pump-house, 28 × 30 ft.; if triplex pumps are used, gasoline engines of 34 HP.; 24 hydrants and eight gates. The water will be secured from artesian wells. L. C. Colburn, Engr., Paw Paw, Mich.

CHICAGO, ILL.—A front addition to the city's pumping station at 68th St. and Yates Ave., to cost $48,000, has been begun. The new part is to be two stories high, with a basement, and is to cover 114 × 144 ft.

KANKAKEE, ILL.—The works of the Kankakee Water Works Co. has been sold to W. G. Maxey, Oshkosh, Wis., representing the dissatisfied bondholders. The property was sold for $3,000, subject to a first mortgage of $125,000. The plant was built in 1880, at a cost of about $115,000. It is said that about $20,000 will be spent at once in improving the works.

WOODHULL, ILL.—The council wants to grant a franchise for works and an electric light plant, according to reports. Estimated cost, $10,000.

ALLISON, IA.—W. F. Ray, Mayor, writes us that this place voted Jan. 9 to build works. Jackson & Moss, Iowa Loan & Trust Bldg., Des Moines, Ia., are preparing plans and specifications, which will be ready in about two weeks.

BROCKTON, IA.—Jackson & Moss, Des Moines, are preparing plans and specifications for works for this place. Population, 1,000.

FORT MADISON, IA.—Elijah Coffin, Secy. Fort Madison Gas Co., it is stated, has applied for a 25-year franchise to furnish this city with water and electric lights. At the expiration of 25 years the plants are to become the property of the city. The question will probably be submitted to a vote of the citizens. The Fort Madison Water Co. now furnishes a water supply. Population, 11,000.

OTO, IA.—Bids are asked until March 1 for furnishing the materials and for constructing the proposed works. P. G. Riedesel, Mayor, writes us that the works will consist of 25,000-gallon reservoirs, double-acting pumps, a 4-HP. gasoline engine, eight fire hydrants, 3,670 ft. of 6 and 4-in. water pipe, two 6-in. cast-iron elbows, one 4-in. cast-iron bend, eight 4 and 6-in. cast-iron T's, crosses, fire plugs, gate valves with boxes, etc. B. F. Colby, Engr., Onawa, Ia.

BARRETT, MINN.—The question of building works is being considered, according to reports.

DULUTH, MINN.—The council is considering an ordinance authorizing the submission to the voters of the question of issuing $150,000 in bonds for extending the mains in that part of the city embracing the territory between 50th and 10th Sts. and 15th and 10th Aves., east and west.

BRITTON, S. DAK.—A company, it is stated, has been organized to sink an artesian well and to supply this place with water.

CLAYTON, MO.—The residents of this place have petitioned for authority to incorporate the town into a city. With the place incorporated steps will be taken at once to build works, a light plant, etc. Population, 3,000.

STANBERRY, MO.—Jackson & Moss, 612 Iowa Loan & Trust Bldg., Des Moines, Ia., are preparing plans and specifications for new works. Population (1890), 2,035.

SUMPTER, ORE.—The Sumpter Gravity Water Supply Co. has been incorporated with a capital stock of $25,000 by C. S. Dunphey, E. S. McComas and others.

PASADENA, CAL.—Heman Dyer, Cy. Clk., writes us that the city is not ready to advertise for the purchase of bonds for the proposed works. Estimates are being made preparatory to an election to vote on a bond issue. A 3-year contract has been entered into with the Pasadena Electric Light & Power Co. for public lighting.

SACRAMENTO, CAL.—The board of trustees will probably submit to the voters the question of issuing $12,500 in bonds for new water pipe and hydrants.

HEBER, UTAH.—Bishop John Watkins has submitted plans for works for this place to cost about $15,000. A. C. Hatch and Wm. Buys are on the committee to solicit subscriptions.

CAMPBELLTON, N. B.—The council is making efforts to purchase the works of the Campbellton Co. Arbitrators were appointed to make a valuation of the works, but on account of trouble over paying the fees the report has not been submitted. It is thought, however, that the value is placed at about $80,000. Population (1890), 600.

OSHAWA, ONT.—The bids received Jan. 5 for furnishing the materials and for constructing the proposed works and sewerage system ranged from $103,800 to $114,623. The citizens will vote on the question of awarding the contract at the election Jan. 21. The water will be supplied by gravity from a spring eight miles distant. There will be an elevated storage tank 115 ft. high. John Galt, Engr., Canada Life Bldg., Toronto; C. French, Chn. Com.

MONTREAL, QUE.—Bids are asked until noon, Jan. 19, for reconstructing the water tower, partly destroyed by the recent fire. L. O. David, Cy. Clk.

IRRIGATION.

SAN DIEGO, CAL.—The California Development Co. has filed notice of appropriation of 10,000 cu. ft. of water per second from the Colorado River. The water is to be used for irrigation in this county and in Lower California. A canal 200 ft. wide, 80 miles long, with a capacity of 10 ft. of water, is to be built.

ALBUQUERQUE, N. MEX.—Bids are asked until Feb. 15 for constructing an irrigation canal about 20 miles long, for the Albuquerque Land & Irrigation Co., as described in our advertising columns. P. E. Harroun, Ch. Engr.

NEW COMPANIES.—Pawnee Ditch Extension Co., Sterling, Colo.; $2,000; to operate in Logan county; W. E. King, W. S. Jenkins and Winfield Morris.

Beitle Ditch Co., Umatilla, Ore.; $1,600; to do a general irrigation business; S. Beitle, C. Ezorth and M. Ezorth.

SEWERAGE.

WOONSOCKET, R. I.—Alderman Wm. E. Hubbard writes us that this city is building a system estimated to cost about $1,000,000. The aldermen expect to build section No. 4 of the main sewer this season by contract. This section will have 700 ft. of 30-in. brick sewer, 280 ft. of syphon under the river, and the remainder, about 1,000 ft. will be pipe.

BUFFALO, N. Y.—John Harrer submitted the lowest bid Jan. 11, for constructing a sewer in Hopkins St., at $26,450.

LITTLE FALLS, N. Y.—Bids are asked by the city clerk until Jan. 27 for constructing pipe sewers in the south side.

ROCHESTER, N. Y.—Bids are asked until Jan. 21, for constructing pipe sewers in two streets and for paving a portion of South Fitzhugh St. with asphalt and until Jan. 24 for constructing a sewer in East Ave. Chas. M. Beattie, Clk. Executive Bd.——The following bids were received Jan. 10 for constructing sewers in Jay and North St. Paul Sts.; all local bidders:

	Jay St.	N. St. Paul St.
Brayer & Albaugh	$5,901	.....
Chambers & Casey	6,147	$4,624
Wm. H. Jones & Co.	6,222	5,211
H. N. Cowles	6,472	3,903
Thomas Holahan	6,814	.....
F. A. Brotsch	7,015	5,009
Whitmore, Rauber & Vicinus	7,115	5,203
Lauer & Hagaman	.....	4,250
James Kearns	.....	5,429

ALLEGHENY, PA.—Ott Bros. have been awarded the contract for building the sewer in the Franklin Road at $3,386.

TUNKHANNOCK, PA.—This place will vote at the February election on the question of issuing $6,500 in bonds to complete the system.

CUMBERLAND, MD.—The council has taken steps to build sewers in South Cumberland, at a cost of about $6,000. City Engineer Shriver and Councilmen Zimmerman and George may be addressed.

WINCHESTER, VA.—The council is considering the question of building a system.

CLEVELAND, O.—The council proposes for this year to build sewers in 80 streets, besides paving in about 70 other streets.

LAKEWOOD, O.—We are informed that a special election will soon be called to vote on the question of issuing bonds for the proposed system. The Walter P. Rice Engineering Co., 545 Society for Savings Bldg., Cleveland, prepared the plans.

SALEM, O.—Bids are asked until Jan. 23, for building certain sewers and for certain street work. Geo. Holmes, Cy. Clk.

TOLEDO, O.—Bids are asked until Jan. 30 for constructing 20 to 15-in. pipe sewers in several streets. L. P. Harris, Cy. Clk.

LOGANSPORT, IND.—City-Engineer Osmer is preparing plans for four miles of pipe sewer extensions. Work will not be begun before the spring.

BAY CITY, MICH.—The council is considering the question of building a sewer in 16th St. Alderman Slazinski may be addressed.

HOLLAND, MICH.—The board of public works is again considering the question of building a system at a cost of about $15,000. Some time ago Alvord & Shields, The Rookery, Chicago, submitted plans for a system, the outlet to be into Black Lake.

HAVANA, ILL.—H. C. Breidert, Cy. Engr., writes us that the council on Jan. 9 passed an ordinance authorizing the issuance of $9,500 in bonds for certain sewers. W. C. McKinney, Chn. Com.; I. M. Henninger, Mayor.

PARIS, ILL.—Louis E. Fischer, Cy. Engr., writes us that nothing definite has been decided upon in regard to a system. Mr. Fischer will make plans and estimates for a system, but whether it will be built depends upon the property owners, under the special assessment laws of Illinois. The system will probably be a separate system, with the Talbot-Sepic tank disposal.

MILWAUKEE, WIS.—Dr. U. O. B. Wingate, Secy. State Board of Health, writes us as follows: At the session of the legislature in 1897, a law was passed authorizing the county board of Milwaukee county to appropriate $10,000, or so much thereof as might be necessary, to a commission appointed by the Governor, to prepare plans for a sewerage system for the Menomonie and Kinnickinnic valleys. The law was declared null and void by the district attorney, and the board of supervisors declared that it had no money, any way, for the purpose; so matters stand the same as they have. In the meantime more sewage is being carried into the Menomonie River and the nuisance is increasing. The legislature, which has just opened its session, will very likely pass another law, but of what nature it is unable to state. The state board of health has been continually urging and advising action in regard to this matter for many years, but thus far it has been unable to secure any results.

CLAYTON, MO.—The question of incorporating this place into a city is being considered. It is proposed to build sewers, water-works and to pave the streets. Population, 3,000.

GUTHRIE, OKLA.—We are informed that the council has taken steps for the immediate construction of a system to cost $65,000. Work will no doubt be begun in the spring. H. H. Hendershot, Engr., Wichita, Kan., and Councilman Saunders may be addressed.

SPOKANE, WASH.—The council will probably soon take steps to arrange for the construction of new sewers in Ward 4.

GRASS VALLEY, CAL.—Local papers state that the new board of city trustees will take immediate steps towards the construction of the proposed system, to cost about $40,000. W. E. Parsons, Mayor.

OAKLAND, CAL.—Mayor Thomas has signed the ordinances authorizing the construction of an outlet at present emptying into Lake Merritt, to cost $8,500, and also of a sewer in Castro St., to cost $1,000.

OTTAWA, ONT.—Bids are asked until Feb. 6 for constructing the following circular brick sewers: About 1,916 ft. of 6-ft. sewer; 6,016 ft. of 5-ft. sewer; 2,980 ft. of 4-ft. sewer, and 1,322 ft. of 2 × 3-ft. egg-shaped sewer. Average depth of cutting, 21 ft., through earth and rock. John Galt, Cy. Engr.; Newton Ker, Asst. Engr.

GARBAGE DISPOSAL—STREET CLEANING

WOONSOCKET, R. I.—Alderman Wm. E. Hubbard writes us that the subject of improved methods of garbage collection has been in the hands of a committee for a long time. The committee recently submitted a report, but it was not adopted, because it did not cover the whole question. The question has, therefore, been postponed indefinitely.

ATLANTIC CITY, N. J.—The council has decided to award the contract for the removal of the garbage of the city to Mark Townsend at $8,900.

CAMDEN, N. J.—B. H. Shivers, Clk. Highway Com., writes us that the contract for rebuilding the furnace of the garbage crematory has been let to Burt & O'Hara at $900, and for each vertical foot of stack relined at $6.85.

PHILADELPHIA, PA.—The following are the new bids received by the director of public works Jan. 12 for street cleaning during the year in (1) 5th and (2) 6th districts: Thomas Parker (1) $82,400, (2) $20,100; Thomas Cunningham (2) $20,500; R. J. & David Peoples (1) $82,900, (2) $21,400; James Curran (1) $85,500, (2) $22,900; George Ruch (1) $80,700, (2) $20,973; Richard T. Bennis (2) $21,474; David McMahon (1) $81,887.

NEWPORT NEWS, VA.—It is stated that an election will soon be held to vote on the question of issuing $90,000 in bonds for a garbage disposal plant, paving, etc.

DETROIT, MICH.—The mayor is urging the council to again consider the question of the city building its own garbage disposal plant.

CAIRO, ILL.—The council is considering the question of new methods of garbage removal.

STREETS AND ROADS

BOSTON, MASS.—Benjamin W. Wells, Supt. of Sts., has submitted an estimate of $1,000,000 for street department purposes.

WINTHROP, MASS.—It is proposed to rebuild Crescent Ave., from Great Head to Winthrop Highlands, a distance of about 5,200 ft. A stone retaining wall about 9 ft. high extending the entire length of the beach with a macadam driveway is estimated to cost $90,000; if a wooden retaining wall, estimated cost, $30,000. Channing Howard, Engr.; Selectmen Lewis and Craib may be addressed.

BUFFALO, N. Y.—Bids are asked until Jan. 24, for paving Ohio St., from Illinois St. to Main St. R. G. Parsons, Secy. Bd. Pub. Wks.

HILLSDALE, N. Y.—The question of awarding contracts for road work will probably be submitted to a vote this spring.

HUNTINGTON (L. I.), N. Y.—Thos. J. Ritch, Thos. H. Saxton and John J. Davis, of Port Jefferson, have been appointed commissioners to consider the proposed construction of Stuart Ave.

JAMESTOWN, N. Y.—Bids are asked by the board of public works until Feb. 1 for constructing 5,374 sq. yds. of brick paving and 3,512 lin. ft. of curbing.

SYRACUSE, N. Y.—Petitions have been presented to the council for paving on Oak and West Kennedy Sts. with brick or asphalt.

UTICA, N. Y.—The council has passed resolutions to pave portions of Washington, Genesee, State, Erie, Bleecker and other streets. Designations of the kind of pavement to be laid will be heard Jan. 27.——The county supervisors are considering the question of purchasing a stone-crushing plant and road outfit, to cost about $8,500. John W. Potter, Chn. Com.

YONKERS, N. Y.—The department of public works is preparing plans for macadamizing Warburton Ave. north to the city line.

ATLANTIC CITY, N. J.—Bids are asked by the council until Jan. 23 for constructing a road to the garbage crematory, and building a new section of board walk. The bids received Jan. 10 were rejected.

CAMDEN, N. J.—A petition has been presented to the council to pave Eighth St., from Vine to Elm Sts., with Belgian blocks. L. E. Farnham, Cy. Engr.

LONGPORT, N. J.—The board of county freeholders, Mays Landing, decided Jan. 11 to construct the proposed macadam road, from Ventnor through Egg Harbor township and South Atlantic City to 24th Ave., Longport. The drive will be 30 ft. wide and cost about $20,000. J. J. Albertson, County Engr., Magnolia, N. J.

PHILADELPHIA, PA.—An ordinance is before the council appropriating $2,000,000 for paving streets in all parts of the city. Councilman Dixon, Chn. Highway Com.

WASHINGTON, PA.—Geo. T. Walker, Burgess, writes us that it has been voted to issue $60,000 of bonds and to expend that amount for paving.

WASHINGTON, D. C.—The district commissioners have reported favorably on a bill providing for an extension of New York Ave., from Florida Ave. to the district line. The estimated cost of grading is $15,000 and macadamizing the roadway 30 ft. wide, $22,000.

PETERSBURG, VA.—G. B. Gill, Cy. Auditor, informs us that the committee has employed an expert to furnish plans and specifications for the proposed paving to cost about $50,000.

BRIDGEPORT, W. VA.—Bids will soon be asked by the council for brick and asphalt paving to cost about $75,000. Hix & Hoge, Engrs., Wheeling, W. Va.

ATHENS, GA.—It is proposed to hold an election some time in February to vote upon the question of issuing bonds for paving. Address Alderman J. H. Rucker.

ATLANTA, GA.—The bridge committee has decided to pave the Mitchell St. viaduct with asphalt, all except the western span, which will probably be paved with Belgian blocks.

ST. AUGUSTINE, FLA.—P. S. Amon, Cy. Clk., informs us that a contract has been awarded to McGuire & McDonald, at $9,000, for paving St. George St., from King to St. Francis St., with brick.

SHREVEPORT, LA.—Bids are asked until Feb. 1 for the purchase of $40,000 of 5% street paving bonds. H. B. Murff, Comptroller.

MEMPHIS, TENN.—Bids are asked by the county commissioners until Feb. 2, for graveling portions of eight streets. D. P. Prescott, Secy.

LOUISVILLE, KY.—Bids are asked by the board of public works until Jan. 23 for brick paving on portions of six alleys. Thos. P. Craig, Secy.

CANTON, O.—An ordinance is before the council for the paving of North Cherry St. L. E. Chapin, Cy. Engr.; L. N. Ley, Cy. Clk.

FORT WAYNE, IND.—The board of works has ordered plans to be prepared for the paving of Pearl St. and two alleys.

LEBANON, IND.—The council is considering the question of paving the public square and Lebanon St. with brick. John H. Hoy, Cy. Clk.

ROCKVILLE, IND.—Bids are asked by the county commissioners until Feb. 8 for grading, draining, graveling and bridging nine highways, a total length of 29½ miles. S. A. Pike, Auditor.

VEVAY, IND.—Bids are asked by the county commissioners until Feb. 6 for macadamizing two roads in Pleasant township. Joseph E. Harte, Auditor.

ADRIAN, MICH.—At the spring election this city will vote on a proposition to construct $200,000 worth of paving, according to reports.

APPLETON, WIS.—Bids are asked until Feb. 1 for the purchase of $50,000 of 3½% street improvement and building bonds. M. K. Gochnauer, Cy. Clk.

MILWAUKEE, WIS.—The property-owners have decided to grade and pave Mitchell St., between Second and Seventh Aves. Henry Lohagen, Henry Rademacher, Philip Saxe and others have been appointed a committee to put the question before the council.

OSKALOOSA, IA.—The council has awarded a contract to George Curlon & Son, Oskaloosa, for 15,600 sq. yds. of brick paving, curbing, etc., on D St.

OMAHA, NEB.—Bids are asked until 2 p. m., Jan. 20, for grading on 11th and 16th Sts., according to reports. Andrew Rosewater, Chn. Bd. Pub. Wks.

ST. LOUIS, MO.—Bids are asked by the board of public works until Feb. 14 for grading on nine alleys and brick paving on concrete base on portions of 31 streets. Robt. E. McMath, Pres.; Emory S. Foster, Secy.——A hearing will be given by the board of public works Jan. 31 to consider the proposed improvement of certain streets and alleys.

BEAUMONT, TEX.—W. C. Humphreyville, Houston, Tex., has been awarded a contract, at $21,814, for 10,000 sq. yds of brick paving on 6-in. concrete base. D. P. Wheat, Mayor.

SEATTLE, WASH.—The committee has decided to pave Madison St. with sandstone, from First to Third Ave.

SPOKANE, WASH.—L. F. Boyd, Cy. Clk., informs us that plans have been submitted to the council for paving several streets with asphalt on cement concrete foundation. It has not been decided what streets will be paved in the spring. Address the secretary, board of public works.

LOS ANGELES, CAL.—The council has decided to grade portions of five streets and lay cement sidewalks on Grand and Gladys Aves.

PLACERVILLE, CAL.—Bids are asked until Feb. 7 for constructing a road; bond, $500. John P. Fisher, Clerk.

MANUFACTURING PLANTS.

GREENPORT (L. I.), N. Y.—Reports state that George J. Hammel, of Rockaway Beach, Oceanus P. O., N. Y., has been awarded the contract for building an ice plant, 72 × 68 ft., at the Greenport Bolling Works for William Ulmer; to cost about $14,000.

NEW YORK, N. Y.—Reports state that an ice manufacturing plant will be erected at Annandale (S. I.) N. Y., and that the contract for the machinery has been let to the Pennsylvania Iron Works, Philadelphia.

HOMESTEAD, PA.—The hardware, stove and tinware manufacturing shop of Baker & Ofkin were destroyed by fire Jan. 6; estimated loss, $30,000.

PHILADELPHIA, PA.—It is reported that Geo. W. Pierson, contractor, will receive bids for the erection of a new mill at Frankford.

PHOENIXVILLE, PA.—Reports state that a new steel mill for this place is projected.

SHARON, PA.—Reports state that the Sharon Iron Co. contemplates the erection of a new large blast furnace stack soon.

YORK, PA.—It is reported that Clowes, Sothern & Moss, Paterson, N.J., have been reorganized and will erect a silk mill in this city.

AUGUSTA, GA.—It is reported that the Perkins Mfg. Co. contemplates the erection of two 3-story additions to its door, sash and blind factory, one 40 × 200 ft., the other 50 × 200 ft.

ROCKMART, GA.—William Bensel & Co., Atlanta, Ga., has been awarded the contract for the construction of the new Aragon Cotton Mill, at Rockmart, for the New York Cotton Mills Co., New York Mills, N. Y.; estimated cost, about $350,000. C. R. Makepeace, Arch., Providence, R. I.

BESSEMER, ALA.—Reports state that the American Pipe & Foundry Co. contemplates enlarging its plant at an estimated cost of $200,000. J. B. Harrison, Pres.——The Addyston Pipe & Steel Co., Cincinnati, O., according to reports, will erect a 3-story 50-ton pipe and steel castings plant to cost about $400,000; the plant to be in operation by June.

AKRON, O.—M. Goldberger and W. T. Phelps, Fort Wayne, Ind., are reported to have made a proposition to the Chamber of Commerce by which the old rolling mill may be rebuilt.

MINGO JUNCTION, O.—A fire at this place, Jan. 12, damaged the plant of the Aetna-Standard Iron & Steel Co.; reported loss, about $50,000. It is said that a new building will be erected at once.

SPRINGFIELD, O.—It is stated that the Jas. Leffel Co. contemplates the erection of a new foundry in addition to its plant.

VAN WERT, O.—Spayd Bros., according to reports, contemplate the erection of a new foundry building.

YOUNGSTOWN, O.—The Ohio Steel Co., of Youngstown, is reported to have decided to build two new rail finishing mills, each 315 × 55 ft., an extension to the hot bed building, 85 × 40 ft., and a new blowing engine house, 128 × 63 ft. The structural work will be done by the Pittsburg Bridge Co. W. R. Marden, Engr.

INDIANAPOLIS, IND.—It is reported that the T. B. Laycock Mfg. Co. will receive bids for the construction of a new plant.

DETROIT, MICH.—Reports state that the Russell Wheel & Foundry Co. contemplates the erection of a steel factory, 75 × 120 ft., at this place.

HOLLAND, MICH.—It is reported that the H. J. Heinz Co., Pittsburg, Pa., will soon begin the erection of a 3-story canning factory, 100 ft. square, and a 100-ft. pier at this place.

PORT HURON, MICH.—Bids are requested by F. Saunders & Co., Port Huron, for building a 500-ton beet sugar factory complete, or for furnishing all machinery required for such plant.

CHICAGO, ILL.—The Cooke Brewing Co., have been granted a permit for the erection of a 4-story brick bottling department building, at 2637-2643 Cottage Grove Ave., to cost $50,000.——The Cole Mfg. Co., stove makers, according to reports, will build a new plant. The first building to be erected will be a 2-story erecting shop, 350 × 50 ft., to cost $20,000, and will be completed by April.

PEORIA, ILL.—The Kingman Plow Co. is receiving bids, according to reports, for the erection of a 1½-story factory building, 80 × 442 ft., to cost about $100,000. C. W. Traeger, Arch.

MILWAUKEE, WIS.—Reports state that the John Schroeder Lumber Co. will soon rebuild its factory, recently destroyed by fire; estimated cost, $50,000. E. R. Liebert, Arch.

GRAND JUNCTION, COLO.—It is reported that the Colorado Sugar Mfg. Co. has been organized with $750,000 capital and will soon begin the erection of a beet sugar factory at this place. John F. Campion, J. R. McKinnie, Charles Boettcher, Chas. N. Cox, Chas. E. Mitchell and Geo. W. Trumble are said to be interested.

HOCHELAGA, QUE.—The directors of the Montreal St. Ry. Co. have decided to build new repair shops at this place, to cost about $50,000.

GAS PLANTS.

LACONIA, N. H.—Bids are asked until Jan. 30 for illuminating the streets of this city with 100 or more Welsbach gaslights or 85 arc lights, as stated in our advertising columns. S. C. Frye, Cy. Clk.

REVERE, MASS.—The council has accepted the report of the committee, recommending the construction of a gas plant. The question will again be considered at the annual town meeting in March.

WEST NEWTON, PA.—The Greensboro Natural Gas Co. has leased about 800 acres in this vicinity for the production of natural gas. A pipe line will be constructed to connect Charleroi with West Newton, Irwin, Manor, Greensburg and other towns.

WASHINGTON, D. C.—A contract has been awarded to Cassidy & Son Mfg. Co., at $18,760, for furnishing the gas fixtures for the new city post-office.

ALEXANDRIA, VA.—Reports state that the Standard Gas Co., Bourse Bldg., Philadelphia, Pa., has submitted a proposition to the council for gas lighting.

NEWPORT NEWS, VA.—The Newport News Gas Co. will extend its plant, according to reports.

EAST LIVERPOOL, O.—H. C. Hamilton, W. H. Williams, Charles Umbstaetter, H. S. McKelvey and Clarence Byrnes, all of Sewickley, Pa., are said to be interested in a proposed plant, to cost about $32,000.

DULUTH, MINN.—The water board is considering the question of purchasing a new gas generator.

CORSICANA, TEX.—Reports state that application has been made to the council by the Garrett Pumping Co. for a franchise to construct a gas plant; also W. L. Gatlin and others for a franchise to construct works and pipe natural gas.

LONDON, ENGLAND.—Bids are asked by the London county council, Spring-gardens, S. W., until Jan. 31, for furnishing and erecting four gas engines at the Victoria embankment, according to reports. C. J. Stewart, Clk.

NEW COMPANIES.—Quincy Gas & Light Co., Norfolk, Va.; $100,000 to $600,000; to acquire and operate lighting and manufacturing properties; Samuel B. Lawrence, Pres., New York; John B. Summerfield, Vice Pres. and Treas., Henry C. Everdell, Secy., and Henry M. Haviland, of Brooklyn, N. Y.; Armitage Matthews and Ruel W. Poor, of New York; James W. Wilcox, Norfolk.

Wyoming Oil Co., Wheeling W. Va., $1,000,000; William Hanley, Stephen A. Holbrook, William B. Chapman, James B. Bradley, of Bradford, Pa.

Imperial Gas Co., Woodsfield, O.; $5,000; manufacture gas; E. A. Culberson, J. S. Cowley, G. Ketterer, R. W. McCameron, P. S. Johnson.

Equitable Gas Light Co., Oakland, Cal.; $1,500,000; to manufacture gas by the Hall process; W. J. Dingee, Pres.; Chas. L. Ackerman, Vice-Pres.; Wm. J. Henshaw, Treas.; J. W. Chisholm and Wm. J. Lauers.

MISCELLANEOUS CONTRACTS.

PIER.—Hoboken, N. J.—Reports state that E. A. Stevens, Hoboken, is having plans prepared for reconstructing the pier at Seventh St.

DEEPENING RIVER, ETC.—Buffalo, N. Y.—Bids are asked until Jan. 26 for deepening and widening Buffalo River, etc. R. G. Parsons, Secy. Bd. Pub. Wks.

HORSELESS CARRIAGES.—Memphis, Tenn.—W. H. Lindstedt, 204 Front St., Memphis, wishes prices and description for a horseless carriage, a pleasure vehicle.

RIVER WORK.—Sioux City, Ia.—J. M. Lewis, Cy. Engr., is preparing plans for changing the course of Perry Creek between West Seventh and Pearl Sts. Address Alderman Smith.

FIRE ALARM SYSTEM.—Lyons, N. Y.—W. A. Powers, Ch. Engr. Fire Dept., Palmyra, N. Y., recommends dividing the village into districts and adopting a fire alarm system.

DRY DOCK.—Duluth, Minn.—Reports state that Capt. Alexander McDougall will soon award contracts for the construction of a new dry dock 600 × 110 ft., to cost about $200,000.

GUN FORGINGS.—Washington, D. C.—Bids are asked by the navy department until Feb. 1 for furnishing 50 sets of 6-in. gun forgings. Chas. O'Neil, Ch. Bureau of Ordnance.

CHAIN FERRY.—Toronto, Ont.—Bids are asked until Jan. 25 for constructing a chain ferry, cribwork, etc., across the western entrance to Toronto Harbor. John Shaw, Mayor.

STEEL PIER.—Atlantic City, N. J.—It is reported that the Casino Amusement Co. is arranging for the construction of a steel pier 1,500 ft. long and 150 ft. wide; to cost about $150,000.

PARK SYSTEM.—Utica, N. Y.—It is proposed to spend $110,000 for purchasing land for a system of parks and $50,000 for improving it. Russell H. Wicks, Chn. Improvement Com.

POLICE SIGNAL SYSTEM.—Los Angeles, Cal.—Bids are asked by the city clerk for installing a police signal system. The bids will be opened at the last meeting of the council this month.

DRAINAGE CANAL.—Chicago, Ill.—Gahan & Byrne, 4209 South Halsted St., Chicago, have been awarded the contract, at $189,000, to complete section 18 of the Chicago Drainage Canal.

CONDENSER TUBES.—League Island, Pa.—Bids are asked until Jan. 24 for furnishing condenser tubes at the navy yard, League Island. Edwin Stewart, Paymaster Gen., Washington, D. C.

DREDGING STREAM.—Boston, Mass.—A hearing will be given Jan. 25 on the question of dredging a new watercourse at Brighton, known as Faneuil Valley Brook. J. H. Jenkins, Secy. Bd. St. Comrs.

CRANE BOAT.—Charleston, W. Va.—Bids are asked until Feb. 13 for building a crane boat for the Great Kanawha River. Addison M. Scott, Res. Engr., Charleston; Maj. W. H. Bixby, U. S. Engr.

PORCELAIN INSULATORS.—Christiania, Norway.—Bids are asked by the Norwegian State Telegraph Administration until Feb. 26 for furnishing 140,000 porcelain telegraph and telephone insulators.

DRY DOCK.—Ashland, Wis.—The chamber of commerce is considering the question of establishing a dry dock and steel plant. It is proposed to organize a stock company with a capital stock of about $300,000.

NAVAL SUPPLIES.—Portsmouth, N. H.—Bids are asked until Jan. 24 for furnishing lead, pipe fittings, brass pipe, etc., for the navy yard. Edwin Stewart, Paymaster-Gen., U. S. N., Washington, D. C.

STEEL HULL, ETC.—New Orleans, La.—Bids are asked until Feb. 13 for furnishing a steel hull, spud frame, etc., for a dredge, as stated in our advertising columns. Capt. Henry Jervey, U. S. Engr., New Orleans.

CAUSEWAY.—Victoria, B. C.—E. A. Wilmot, Cy. Engr., has submitted plans to the council for a causeway across James Bay, to consist of a masonry retaining wall on pile foundation, with a 70-ft. roadway; estimate cost, $110,000, according to reports.

OVERHEAD TRAVELLER.—London, England.—Bids are asked by the London county council, Spring-gardens, S. W., until 10 a. m., Jan. 24, for furnishing and erecting a five-ton overhead traveller at the pumping station, North Woolwich. C. J. Stewart, Clk.

BUOYS, ETC.—Tompkinsville (S. I.), N. Y.—Bids are asked until Feb. 20 for furnishing to the lighthouse establishment buoys, appendages and mooring chains, for the year ending June 30, 1899, as stated in our advertising columns. Capt. E. M. Shepard, U. S. Engr., Tompkinsville.

STONE HEADS.—Newark, N. J.—Bids are asked until Feb. 20 for furnishing and constructing stone heads to subways under the driveway at Branch Brook Park, as stated in our advertising columns. In our issue of Dec. 15 we gave the bids for stone heads received Dec. 5. A Church, Secy. Essex County Park Comn., 800 Broad St.

PARK WORK.—Chicago, Ill.—Several hundred thousand dollars will be expended by the south, west and Lincoln park commissioners for improvements which have been outlined for this year, including the construction of a new sea wall for Lincoln park, the completion of Jackson Park improvements, 30 acres of tennis courts, and the resurfacing of Michigan Ave. from 18th to 35th Sts.

CANAL WORK.—Albany, N. Y.—Assemblyman Redington has introduced a bill providing for the enlargement and improvement of the canals of the state. The Erie and Oswego canals are to be 100 ft. wide and 9 ft. deep from Albany and Watervliet to Buffalo and from Syracuse to Oswego; also the Champlain canal to be 44 ft. wide and 7 ft. deep between Watervliet and Whitehall.

PIER.—Philadelphia, Pa.—The following bids were received by the bureau of surveys Dec. 13 for constructing the superstructure for the Chestnut St. pier; the work to be completed in six months; (A) work complete using galvanized iron throughout and a wooden upper deck; (B) complete using galvanized iron for building below upper deck, copper for pavilion, wooden upper deck; (C) complete using galvanized iron throughout and a granolithic upper deck; (D) complete using galvanized iron for building below upper deck, copper for pavilion and granolithic upper deck; Geo. S. Webster, Ch. Engr.; Thos. M. Thompson, Dir. Pub. Wks.; N. L. Stamm, Asst. Engr.:

Bids Received at Philadelphia, Pa., Dec. 13, 1898, for Constructing the Superstructure of a Pier.

Bidder.	Plans A.	Plans B.	Plans C.	Plans D.	Price for extras. A cu. yd. Concrete in place.	A cu. yd. Excavation.	In place. Iron or steel, a lb., cts.	In place. Sawed yel. pine, per M.
Daniel J. McNichol, 704 Betz Bldg.	$85,185	$87,685	$84,685	$87,150	$8.00	$1.00	5.0	$50.00
J. E. & A. L. Pennock, 305 Walnut St.	85,600	86,900	84,700	86,200	7.00	1.20	5.0	24.00
*Armstrong & Printzenhoff, Land Title Bldg.	83,220	85,445	83,089	85,364	6.75	1.00	3.0	35.00
Ryan & Kelley, 8 South Broad St.	90,669	93,430	88,239	91,000	6.50	1.00	*3.0	35.00
Chas. McCaul, 10 W. 11th St.	87,580	89,555	85,874	87,849	7.15	1.65	3.0	45.00
Macey, Henderson & Co., 1215 Filbert St.	84,287	86 760	87,737	90,170	6.50	1.25	2.4	32.00

*Awarded contract on Plan D, Jan. 9, and also for extras.

PIER SUPERSTRUCTURE, ETC.—Duluth, Minn.—Bids are asked until Feb. 16, for constructing concrete footing blocks and concrete sub and superstructure of the south pier and for constructing concrete footing blocks of the north pier, Duluth Ship Canal, as stated in our advertising columns. Each pier is about 1,700 ft. long, 24 ft. wide, and from 15 to 25 ft. for entire length. The superstructure is to be hollow and the substructure solid blocks 3 ft. high. Maj. Clinton B. Sears, U. S. Engr., Duluth.

CONTRACT PRICES.

PORTLAND CEMENT.—Duluth, Minn.—Maj. Clinton B. Sears, U. S. Engr., received the following bids Jan. 10, 1899, for furnishing 12,000 bbls. of Portland cement; contract awarded the Northwestern Lime Co.:

Bidder.	Cement Brand.	Cement A barrel.
Northwestern Lime Co., St. Paul, Minn.	Atlas.	$2.19
Empire Portland Cement Co., Chicago.	Empire	2.50
Garden City Sand Co., Chicago.	Star.	2.30
Sinclair & Babson, New York.	Alsens.	2.89
Kelley Isl. Lime & Trans. Co., Cleveland.	Lehigh.	2.30

SHEET PILING.—Fort Hancock, N. J.—Capt. G. C. Bailey, A. Q. M., U. S. A,. received the following bids Jan. 5, 1899, for renewing about 200 lin. ft. of sheet piling shore protection at Fort Hancock:

Bidder.	A lin. ft.
Henry V. Sloat, 227 18th St., Brooklyn.	$9.93
Henry L. Spearin, 11 Broadway, New York.	12.50
Edw. B. Jenks & Co., 143 Liberty St., New York.	9.94
F. W. McNeal Co., 82 Reade St, New York.	10.52
Robert P. Blair, Seabright, N. J.	10.00
Jelleme & O'Leary, 93 Cortlandt St., New York.	24.80
C. H. Connell, 2 Cortlandt St., New York.	9.50
James DuBois & Co., 11 Broadway, New York.	12.00
W. H. Brodie & Co., 188 Greenwich St., New York	16.00
Augustin Walsh, 96 Water St., New York.	25.00
Geo. W. Rogers, New York.	13.75

BRICK PAVING.—Oskaloosa, Ia.—Sam'l Ver Veer, Cy. Engr., writes us that the following bids were received Jan. 10, 1899, for brick paving:

Bidder.	Excess grading, 500 cu. yds.	Brick paving, 15,000 sq. yds.	Cement curbing, 8,000 lin. ft.	Total.
*Geo. H. Carlow & Son.[1]	$0.14	$1.20	$0.33	$23,131
P. T. Walsh, Davenport, Ia.	.20	1.32	.32	23,540
Smith, Moss & Brown, Chicago	.25	1.36½	.33	24,356
J. W. Campbell, Des Moines.	.19	1.38⅜	.34	24,786
Magden & Scheeley, Des Moines	.25	1.36¾	.30¾	24,195
Peter Nelson, Oskaloosa.	.20	1.32½	.35	23,885
E. Rushart & Co., Omaha†	...	....	.33¾	3,004

*Awarded contract. †Informal. [1]Oskaloosa. Paving: 4-in. bed of sand, brick on flat surface; 1-in. sand, brick on edge with sand filler. Curbing: Cement curb, 3 parts (by measure) gravel and sand to 1 part (by measure) Portland cement, 22 ins. deep, 6 ins. wide at bottom and 5 ins. at top.

GUN FORGINGS.—Washington, D. C.—The Midvale Steel Co., Philadelphia, Pa., submitted the lowest bid Jan. 5, 1899, for constructing eight sets of 12-in. gun forgings at 13⅞ cts. a lb. The Bethlehem Iron Co., South Bethlehem, Pa., submitted the next lowest bid at 18 cts. a lb. The bid of the Midvale company is the lowest ever received by the department for gun forgings. At one time the price asked was 28½ cts. The ordnance bureau has recommended to the secretary of the navy the advisability of accepting the bid of the Midvale company.

ELECTRIC LIGHTING.—Columbus, Ga.—M. M. Moore, Clk. Council, writes us that the Columbus R. L. Co. submitted the only bid Jan. 4, 1899, for electric lighting at $85 a light a year for 120 2,000-c. p. arc lights for street lighting, moonlight schedule. This bid was accepted by the council Jan. 12.

FILLING, ETC.—Canton, O.—The following bids were received last week for filling Jackson St. from the C. C. & S. Railway tracks to the Nimishillen Creek bridge; L. N. Ley, Cy. Clk.; L. E. Chapin, Cy. Engr.:

Bidder.	Unloading—Gondola cars, 750.	Unloading—Flat cars, 250.	
T. K. Turnbull	$4.10	$0.75	$893
John Hadley	1.50	1.00	1,173
Harry Corl	2.25	1.50	1,762
Edward Doolin	1.20	.80	940
Richard Stanton	1.78	1.10	1,383
Joseph George	1.16	1.10	925

PORTLAND CEMENT.—St. Paul, Minn.—Maj. F. W. Abbot, U. S. Engr., writes us that the following bids were received Jan. 12, 1899, for furnishing 5,000 bbls. of American Portland cement, as advertised in Engineering News:

Bidder.	A bbl.	Brand.
H. E. Carpenter, Minneapolis	$2.05	Wayland Portland.[1]
Sandusky (O.) Port. Cem. Co.	1.90	Medusa.[2]
Comcl. Wood & Cem. Co., Phila.	1.64	Saylor's Portland.[3]
Garden City Sand Co., Chicago.	1.64	Star.[4]
Kelley Isl. Lime & Trans. Co.*	1.75	Lehigh Portland.[5]
Northwestern Lime Co, St. Paul	1.15	Atlas.[6]
	2.47	Atlas.[7]

*Cleveland. Free on board: [1]Wayland, N. Y.; [2]Bay Bridge, O.; [3]Copley, Pa.; [4]Siegfried, Pa.; [5]Ormand, Pa.; [6]Northampton, Pa.; [7]St. Paul, or Ashland, Wis.

INDUSTRIAL NOTES.

THE CARNEGIE STEEL CO., Homestead, Pa., is reported to have purchased the plate mill plant of the Bethlehem Iron Co., South Bethlehem, Pa., and will move the plant to the former place.

THE BRIXEY KERITE CABLE WORKS, Ansonia, Conn., is reported to be at work upon a submarine electric cable, 30 miles long, for the U. S. Government, to be used between two islands of the Philippine group. It is being made to withstand a current of 5,000 volts. Mr. W. C. Brixey is the proprietor of the works.

THE STANDARD UNDERGROUND CABLE CO., Pittsburg, is reported to have a contract for ten miles of heavy telephone cable from the Japanese Government, for use in the extension of its telephone system in Tokio. The contract is said to amount to about $20,000, and to be the first order from Japan received by the company. About 4,000,000 ft. of insulated copper wire will be required.

THE PRESSED STEEL CAR CO. has been incorporated in New Jersey with $25,000,000 capital; to manufacture passenger, freight and steel railway cars, trucks, frames, bolsters, etc. The company is formed by the consolidation of the Fox Pressed Steel Equipment Co., Pittsburg, Pa., and Joliet, Ill., and the Schoen Pressed Steel Co., Pittsburg. The incorporators are Adrian H. Larkin, Arthur H. Van Brunt and Francis L. Patton, Jr., of Jersey City, N. J.

THE FERRACUTE MACHINE CO., Bridgeton, N. J., is reported to have recently shipped a 12,100-lb. general punching press for sheet-metal work to Manning, Maxwell & Moore, 111 Liberty St., New York, for shipment abroad. The company also shipped a 20,600-lb. press for cutting armature discs to Jos. Sankey & Sons, Bilston, England, and an 8,900-lb. double-crank press and a 15,900-lb. press to Adolphe Janssens, Paris, France, for use in electrical factories in France and Germany.

THE JEFFERY MFG. CO., of Columbus, O., is introducing, as one of its specialties, a rotary concrete mixer of a pattern which has been extensively used in various works. It consists of a cube shaped iron box, 4 ft. to 6 ft. square, built up of heavy steel plates, and well braced and stayed. A triangular door is fitted in one corner for charging and dumping. The box is attached to a horizontal shaft which passes through diagonally opposite corners of the box, and is supported by heavy pillow blocks. The box is revolved by means of power applied to this shaft.

THE LANG & GOODHUE CO., Burlington, Vt., has just completed and shipped a 6,000,000-gallon pumping engine, designed by Mr. W. H. Lang, to Ogdensburg, N. Y., to be used in forcing water from the St. Lawrence River through the city mains with a direct pressure of 110 lbs. to the square inch. The engine requires a floor space 12 × 32 ft. and is 15 ft. high. The driving mechanism consists of a 15-in. steel shaft on which is mounted a cast steel pinion 3½ ft. in diameter with a 24-in. face. The main gear is 12 ft. 2 ins. in diameter, with a 22-ft. face, and weighs five tons, being mounted on a forged steel crank shaft 15 ins. in diam. The two water cylinders are 3½ ft. in diam. and 8 ft. long, lined with bronze sleeves through which operate bronze plungers 20⅝ ins. in diam. with 42-in. stroke. There are 192 water valves fitted with bronze seats and spindles and a 20-in. pipe connects with the water system. The total weight of the pumping engine is between 70 and 75 tons and it was built entirely by the Lang & Goodhue Co., the only parts not made by it being the heavy steel quill, which was forged by the Bethlehem Iron Co., South Bethlehem, Pa., the steel shaft and connecting rods, which were forged by the Cape Ann Anchor Works, Gloucester, Mass., and the cast steel pinion and cross heads, which were made by the Midvale Steel Co., Nicetown, Pa. The finishing of all these forgings was done by the Lang & Goodhue Co. About 20 years ago the company furnished a 2,000,000-gallon pumping engine to the same waterworks, and it has been in operation ever since. The contract for the new pump was obtained last spring, in competition with four other bidders.

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